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ALL ABOUT CALIFORNIA



AND THE INDUCEMENTS TO SETTLE THERE.

[FOR GRATUITOUS CIRCULATION.]

SEVENTH EDITION.

SAN FRANCISCO :

PUBLISHED BY THE CALIFORNIA IMMIGRANT UNION,

534 CALIFORNIA STREET.

Printed by A. L. Bancroft & Co., 721 Market Street.

1874.

ABOUT
AMERICA



BY HENRY WADDELL

ILLUSTRATED BY
JOHN T. LEWIS, NEW YORK.

FOURTEEN VOLUMES
COMPILED AND ARRANGED FOR CHILDREN
BY HENRY WADDELL.

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CALIFORNIA IMMIGRANT UNION, }
Office 534 California Street. }

[Letter No. 12.]

SAN FRANCISCO, March, 1874.

In issuing our Seventh English edition of "All about California," I desire to preface it with a general letter to our friends in the Eastern States and Europe, answering, as nearly as possible, most of their special inquiries in reference to the inducements offered by California to the intending immigrant. We are daily in receipt of large numbers of letters, many of which ask from five to thirty questions, and all of which are answered by the documents we send in return, such as "All about California," "Resources of California," "State Surveyor-General's Report," "Report of the State Agricultural Society," and other State Reports, local and county newspapers, etc. Our time is occupied in a great measure in giving information, directions, and letters of introduction (to our correspondents and friends through the State) to new comers, so that it is impossible to answer all the letters we receive, except by sending documents and a postal card.

The United States Land Laws are the same all over the United States, so those of California do not differ from, but are precisely as liberal as those of any other State or Territory in which the Government owns land. We have also some laws passed by the State of California regulating the disposition of such lands as were granted to the State by the National Government. Most of these State Lands have however been disposed of, as they granted long time for payment at low interest, and thus speculators found it profitable to purchase them in anticipation of the actual wants of settlers. Many of these lands however are for sale by the buyers at \$2.50 per acre payable half cash, and the balance on an indefinite credit at ten per cent. per annum interest.

In the *Resources of California* you will find general and sufficient statements of the United States Land Laws which apply to California. They may be briefly summed up as follows: Where Government has aided the construction of railroads by giving them half of its land, checker-board fashion, for ten or twenty miles on each side of the line, government land is valued at \$2.50 per acre.

Everywhere else, except where mining claims exist, it is valued at \$1.25 per acre. Where surveyed land has been "offered" for sale for several years without buyers, such "offered lands" may be purchased in large tracts for \$1.25 per acre. Most of the best lands of this character, considered with reference to their nearness to market, etc., have been sold. The bulk of the lands, however, have been so "offered," and are open to actual settlers only under the "Homestead" and "Pre-emption" laws. Under these laws within a railroad reservation a settler can obtain 80 acres of land; or if he had 80 acres before, may obtain 80 acres additional, making 160 acres altogether. Everywhere else he can obtain 160 acres of vacant government land. Under the Pre-emption law he obtains his land by actually settling on it, and paying for it \$1.25 per acre 18 months after settlement, and obtains his patent. Under the Homestead law he pays the Land Office \$22 when making his settlement, lives on it five years, then proves the fact by his neighbors, and pays \$10 additional and obtains his patent, which makes him full owner.

Any American citizen, 21 years of age or over, can obtain government lands on these terms. Any foreigner of the same age can do the same if he has been naturalized, or has taken the first step to do so; that is, has declared his intention to become a citizen of the United States, before the clerk of some court of record. This can be done the first day after landing here, and costs not over \$2.

A great many persons write to us to obtain special rates for passengers and freights, chartering box cars, engaging second class and emigrant cars for a colony, etc., etc., all of which information can be obtained and arrangements made at the nearest depot to their homes. I refer you particularly to the following gentlemen, who have uniformly acted in connection with our Union in forwarding the interests of the intending immigrant:

J. N. Abbott, Esq., Gen. Passenger Agent, Erie Railway, New York; J. A. Burch, Esq., General Eastern Passenger Agent, Lake Shore & Michigan Southern Railway, Buffalo, N. Y.; T. L. Kimball, Esq., Gen. Passenger Agent, Union Pacific Railway, Omaha; France Chandler, Esq., Gen. Ticket Agent, North Missouri Railway, St. Louis; Beverly R. Keim, Esq., Gen. Ticket Agent, Kansas Pacific Railway, Kansas City, Missouri; E. St. John, Esq., Gen. Ticket Agent, Chicago, Rock Island & Pacific Railway, Chicago; F. Knowland, Esq., Gen. Agent Union Pacific and Central Pacific Railway, New York; D. M. Boyd, Jr., Esq., Gen. Passenger Agent, Pennsylvania Central R. R., at Philadelphia; L. M. Cole, Esq., Gen. Ticket Agent, Baltimore & Ohio Railway, Baltimore.

Information in reference to all the railroad lands in California can be obtained by addressing B. B. Redding, Esq., Land Commissioner of the Central Pacific R. R. Company, San Francisco, Cal.

Government land, at Government prices, can readily be obtained at any of the Land Offices.

This pamphlet was among the first of its publications. The information it contains is drawn from official and other sources and may be accepted as entirely

reliable. It has been our aim to state nothing which the facts do not abundantly warrant. We have restrained from saying much that might have been said, which, though well understood by all Californians, might be regarded with distrust by strangers or excite undue expectations and lead to disappointment. They will be better pleased to find our statements exceeded by the facts. Our fisheries and lumber business are very important, and growing rapidly. Our mineral resources are here scarcely more than alluded to, though our annual export of treasure speaks for itself. It is not that we undervalue our gold, silver, copper, tin, iron and quicksilver mines, that we say little concerning them; but because it is not a mining, but a *farming*, population, that we most desire. What we say and wish understood everywhere, is, that no country offers inducements to men of moderate means, but of enterprising and industrious habits, and particularly to agriculturists, equal to those presented by California. The facts here given bear out this statement. Those who, in older countries, could never hope to own the lands they lease and cultivate, may here readily become landed proprietors, and, in the course of a very few years, surround themselves and families with all the comforts of life, in a climate that is unequaled for salubrity, and upon a soil that yields the richest and most varied rewards to the toil of the husbandman. Our laws are more liberal than those of the older States. They are particularly favorable to poor men. There is no imprisonment for debt, and the unfortunate debtor and his family are protected from merciless creditors by our liberal homestead and exemption laws. The State provides liberally for the education of all its children; the State University and its public schools, from the lowest to the highest are liberally endowed, equal to the best in the world, and open freely to the children of the poorest citizen. Every county receives its share, *pro rata*, of the State School Fund, and wherever there are in a district sufficient children to form a school, the parents are entitled to demand, as a right, that a teacher, paid from the public treasury, shall be supplied them.

In conclusion, we invite all who desire information concerning the resources of California, and the lands, public or private, open to settlement, and whether they desire to come here singly or in numbers—to apply to us or our agents, by letter or in person, and we shall take pleasure in furnishing it or enabling them to obtain it, and to assist them otherwise in the manner above stated. With these remarks we invite a careful perusal of the other portions of these pages, in order that the reader may see whether it will not be as much to his own interest to settle in California as to the interest of California to have him settle here with his family.

WM. H. MARTIN, GEN'L AGENT,
California Immigrant Union.

CALIFORNIA IMMIGRANT UNION,

534 CALIFORNIA STREET, SAN FRANCISCO, CAL.

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CALIFORNIA

AS A HOME FOR THE EMIGRANT.

A BRIEF STATEMENT OF

ITS PUBLIC LANDS, WAGES, CLIMATE, AGRICULTURE, MANUFACTURES, ATTRACTIONS AND GENERAL BUSINESS.

By JOHN S. HITTELL.

A PRIZE ESSAY,

WRITTEN FOR THE CALIFORNIA IMMIGRANT UNION,
AND PUBLISHED UNDER ITS AUSPICES.

Migration as a Source of Wealth.

Migration has been one of the chief sources of individual wealth in the present century. The old centers of civilization had become overcrowded; the land was unable to sustain the multitude; poverty and misery were the result for a large proportion of the people. The establishment of American Independence, the adoption by the United States of a free government and a liberal land policy, the invitation to Europeans to become citizens, the invention of cheap and speedy means of transportation by land and water, and the dissemination abroad of information about America, led to a great peaceful migration, the like of which had never been witnessed before. In the last eighty years six million five hundred thousand persons have crossed the Atlantic to become permanent residents of the United States, and at a moderate estimate they added each, on an average, one thousand dollars to the wealth of the country, by merely making their homes here, and much more by the labor which they did after their arrival. Europe was benefited by their departure. There was more room and more comfort for those left behind; and soon there was more trade, because the emigrants prospered in their new homes and were enabled to purchase many

comforts and luxuries which they never could have afforded if they had remained in their native lands. They also supplied Europe with provisions and the raw material for manufactures much cheaper than they could be obtained from other sources. Thus all parties were benefited.

Migration, as a source of wealth, has not yet ceased, and will not cease for many years to come. It is proper that the enterprising and industrious should migrate from old States, which offer no good chance for them, to new countries, which present more favorable opportunities.

Advantages of California for Emigrants.

The present population of California is sparse; and there is the more room therefore for the growth of trade, and more opportunities for new comers to establish themselves in business. It is far better for the emigrant to go to a new country than to an old one; better to go to one where the population will double than to one where it will increase only twenty per cent. in five years. The population of Illinois is 2,500,000, and that of California is 600,000. An addition of 1,000,000 is only forty per cent. to the former, and one hundred and sixty-six per cent. to the latter; and the increase in the value of land and in the amount of trade is about in the same proportion. The denser the population the smaller will be the relative growth and the profits necessarily accompanying growth. Other things being equal, the emigrant should always prefer the sparsely-settled States, and California has in this respect a decided advantage over the more populous country in the northern part of the Mississippi Valley.

The following are some of the advantages of California for emigrants:

1. Many railroads will soon be built. The road from Stockton to Visalia, a distance of one hundred and sixty miles, will run through the richest grain district of the State, a large part of it now uncultivated because there is no mode of transporting produce to market at any expense that farmers can afford to pay.

The Oregon and California Railroad is now being built from Marysville to the State line, two hundred and thirty miles, opening up the northern part of the Sacramento Valley, and bringing to California the trade of Oregon and Washington. Congress has granted 12,800 acres of land for each mile, and requires the construction of twenty miles every year. A hundred miles are to be completed in 1870.

The Vallejo and Cloverdale Railroad, seventy miles long, will open up Sonoma and Mendocino counties, which are among the richest parts of the State.

The Copperopolis Railroad, thirty-eight miles long, running eastward from Stockton, will be built soon. Congress has given 230,000 acres of land to the road, and the company owning the franchise say it shall be built this year.

2. Promises are made that the thirty-second parallel Southern Pacific Railroad shall be built soon.

A number of other railroad projects are seriously entertained, and some of them will probably be carried to completion in a few years. Among these are, the Saucelito and Humboldt Bay Road; the Southern Pacific Railroad, from

Gilroy to Fort Mohave; the Beckwourth Pass Road, from Oroville to Ogden, the Vallejo and Stockton Road, to connect those two points; the road from Santa Cruz to Redwood City; the road from Santa Cruz to Gilroy, by way of Watsonville; the road from Gilroy to Monterey; and the road from Gilroy to San Diego along the coast.

It looks like promising much to speak of so many roads as likely to be built; but in the last five years six hundred of the Central Pacific, one hundred and twenty-five of the Western Pacific, one hundred and thirty-eight of the California Pacific (running from Vallejo to Sacramento, Marysville and Calistoga), thirty of the Southern Pacific (from San José to Gilroy), forty of the California and Oregon, and twenty of the Los Angeles—making nine hundred and fifty-three miles in all—have been built; and these roads will serve as a basis and stimulus for others.

The construction of railroads implies the possession of important resources, the rapid development of industry, and the increase of population and wealth. All the roads mentioned, including the Southern Pacific, to terminate at San Diego, and the Northern Pacific, to terminate at Puget Sound, will contribute to attract people to all parts of the coast, and create a large trade to concentrate at San Francisco Bay.

3. The Sacramento River is navigable from the bay northward to Sacramento, one hundred and twenty miles, for large, commodious steamers, as fine as any upon the rivers of the eastern States. They ply daily from Sacramento northward; smaller light-draft steamers ply regularly to Red Bluff, two hundred and fifty miles further, and on the Feather River sixty miles to Marysville. The San Joaquin River is also navigable for large steamers which ply daily to Stockton, one hundred and twenty miles. Above Stockton, light-draft steamers ascend towards Visalia, two hundred miles, and also for some distance up its branches, the Stanislaus and Tuolumne, and also the Mokelumne River. The light-draft steamers on all these rivers carry with them large barges in which the crops of the farmers, firewood and other products, are cheaply and rapidly transported to a market at San Francisco at very low rates. A number of the creeks and sloughs emptying into the Bay of San Francisco are also navigable and ascended by numerous steamers and sailing craft, which carry freight and passengers at reasonable prices. Thus, a large portion of the interior of the State, and particularly both of its main valleys are, to a great extent, independent of railroads, while the competition between land and water carriage insures low rates of freights and fares on both.

The people of California are distinguished for intelligence, enterprise, industry, and cordiality of manners. They welcome strangers, and by the improvements which they are continually making, they attract business and give value to the land. The emigrant should never forget that the greatest resource of a country—better than gold, silver, coal, iron, wine or silk, or than all together—is an educated, orderly, energetic population, such as California has.

Proximity to a main route of commerce is desirable, because the throng of

passengers and freight will create business and pay profits for millions of people, and make a market for produce raised near the line. Proximity to a terminal point on such a route is also desirable. Such a point is San Francisco. Nearly all the enlightenment, industry and wealth of the world, are in the northern temperate zone, in which a great steam line of travel now extends from Constantinople westward to Shanghae, or from the western to the eastern shore of Asia, across two continents and two oceans. There is only one point on the whole line which the traveler circumnavigating the world by steam cannot avoid, and that is San Francisco.

California has a number of remarkable natural attractions, which will draw visitors from all parts of the world. The fame of Yosemite, the Big Trees, the Geysers, Monte Diablo, St. Helena, Clear Lake, and the California Alps, is co-extensive with Christendom, and they will in time contribute much to enrich the State.

The emigrant wants to go to a country that has a large area of good land unoccupied. California has, according to estimate, 80,000,000 acres of tillable land, of which only 5,000,000 acres are inclosed, and more than 48,000,000 acres remain open to purchase. Much of this land is remarkably fertile, some producing more wheat, more grapes and fruit, to the acre than any land in the Atlantic States or Europe.

The climate of California contributes vastly to the enjoyments of life. The winters in the lowlands are so warm that snow and ice are great rarities. The thermometer never remains at the freezing point for twenty-four hours. There is no intense suffering from cold. Along the middle coast the summers are always cool, and heavy woolen clothing is worn throughout the year in San Francisco. In the interior and on the southern coast, the summer days are warm, but the nights are always cool. California has a climate very similar to that of Italy, and it is the only district in the New World so favored in that respect. Many thousands of Europeans go to the Italian peninsula on account of the climate, and large numbers of Americans will resort to this State.

The sanitary condition of California is excellent. The constant trade winds on the coast keep the air in continual motion, and any unwholesome exhalations from the earth are immediately carried away. The numerous diseases that result elsewhere from severe cold, exhausting heat by night as well as by day, cloudy weather and a stagnant atmosphere, are here lacking. Fever and ague are found in the lowlands of the Sacramento basin, and the fogs of the middle coast are not good for diseases of the throat and lungs; but otherwise, the climate of California may be regarded as remarkably conducive to health and longevity.

The climate has many advantages for the farmer. He needs no barn to shelter his grain, no stable for his cattle. His horses will work and his cows yield milk tolerably well if they never get any cultivated food. He can thresh without stacking his grain; he can work all through the winter; he can grow a great variety of fruits which will not thrive in the Atlantic States or northern Europe. All domestic animals are healthier, increase more rapidly and thrive with less care, than in the Atlantic States.

There is a great opening for manufactures, which must be built up, because the abundance of raw material, the great cost of exporting it and reimporting the manufactured articles, and the distance from the manufacturing centers on the North Atlantic will give protection to home production.

The State possesses a variety of valuable minerals. The richest mines of the northern hemisphere are here. The annual production of gold is more than \$20,000,000. There are also valuable mines of quicksilver, tin, copper, coal, manganese, and beds of marble, slate, sulphur, porcelain clay, soapstone and asphaltum. In the foot hills of the Sierra Nevada millions of acres contain gold in quantities sufficient to pay well at some future day. At present, there are many farmers who sluice out the ravines on their farms with profit in the intervals of agricultural labor.

All these advantages must infallibly result in attracting to California a large migration, and consequently land will rise in value and trade will increase with rapidity, thus securing a large profit to those who settle here soon. But if my anticipations of the growth of the State should prove too sanguine, those who come here will still have the satisfaction of living in a country where they can enjoy life without painful exertion.

Disadvantages.

The country has some drawbacks. There is an occasional drought, about once in seven years on an average; but even then our wheat crop is nearly up to the ordinary yield in most of the Eastern States. When the bare plains shall be covered with trees and cultivated, we can hope for more rain and for more regular seasons than we have at present; and it is probable that irrigating canals, like those of Lombardy, will, in time, supply water from the mountains to large districts. In the Sacramento basin, we have occasional floods, but they are little worse than those in the Atlantic States. Earthquakes are not uncommon, but they are usually very slight, and have thus far resulted in very little loss of life, while the number of persons killed in other countries, as in the Mississippi Valley, by meteoric phenomena, such as lightning, tornadoes and sunstroke, is very considerable every year. The high rates of wages and interest, which are double those in the Eastern States, are disadvantages for some classes, but they are advantages for others.

How to Obtain Title to Public Land.

The public land of the United States is surveyed or unsurveyed. All, unless specially reserved, is open to settlement and occupation by any citizen or white man who has declared his intention to become a citizen; and if unsurveyed, the settler will be permitted to obtain the land, unless wanted for some public purpose. If it is not surveyed when he goes upon the land, he will get, not perhaps the exact tract which he occupies, but one hundred and sixty acres bounded by the lines run by the Government, which lines may not agree with his own.

The surveyed public lands are divided into townships six miles square; each township is divided into thirty-six sections, each a mile square and containing

six hundred and forty acres; each section is divided into four quarter sections each half a mile square of one hundred and sixty acres; and each quarter is divided into four quarter-quarters of forty acres each. The township and section lines all run either north and south or east and west. The sections are always numbered in the same order, commencing with one on the northeast corner, running west to six; section seven is south of six, and the numbers run east to twelve, which is under one; on the next row they run back to the west line and so on back and forth. Thus, the sections along the east line of the township running from north and south are one, twelve, thirteen, twenty-four, twenty-five and thirty-six; and on the west line commencing at the top and running south they are six, seven, eighteen, nineteen, thirty and thirty-one. The townships in California are all measured from some mountain; in the middle of the State from Mount Diablo; in the south from Mount San Bernardino. Measuring on the meridian, we say a piece of land is in a "town" of such a number, north or south; measuring east or west it is in such a "range." Coloma, where gold was discovered by Marshall, is in town eleven north, range ten east from the meridian and base of Mount Diablo. Counting six miles each way we ascertain that the federal township of Coloma is sixty-six miles north and sixty miles east of the summit of Diablo. The quarter sections are respectively the northeast, northwest, southwest and southeast, and each quarter-quarter is designated in the same manner. Thus, for example, a deed conveying the southwest quarter of the southwest quarter of section eighteen, in town three north, range three west, meridian and base of Mount Diablo, is explicit enough to enable any surveyor or any person familiar with the land system of the United States to find the place at once on the map. The smallest "legal subdivision" in the general surveys is forty acres, or a quarter-quarter.

The public lands are disposed of by sale at auction, private entry, pre-emption and homestead claim. After land is surveyed into sections or sectionized, it is advertised for sale, and all that is not occupied by pre-emptors or homesteaders who have filed notices of their claims, is sold to the highest bidder who bids \$1.25 per acre, or more. That which is not sold may be taken at private entry at \$1.25 per acre, in such amounts as the purchasers want. Poor men usually get land by pre-emption or homestead claim.

The pre-emptor selects his quarter section of land, settles on it, within thirty days after his settlement files a declaratory statement in the United States Land Office that he has settled on it, builds a house, improves the land, and within one year from the settlement files an affidavit and proves by two witnesses that he has built a house and improved the land; and then on paying \$1.25 per acre in greenbacks, or some Government warrant receivable for land, gets a patent. If he settles on the land before it is offered at public sale, he must pay up before the sale. Any adult male citizen or adult white male foreigner who can become a citizen, and every widow citizen who has not three hundred and twenty acres of other land, and does not move from his or her land to the public land, can pre-empt once.

Homestead claims can be taken by any one entitled to be a pre-emptor. The

claim may be for one hundred and sixty acres or less in legal subdivisions. The applicant goes upon the land, files his application, builds a house, and cultivates the land for five years; files an affidavit sustained by two witnesses of continuous residence and cultivation, and then gets his patent on payment of \$22 fees if he has one hundred and sixty acres, or \$11 if he has eighty acres. The land is not liable for debts incurred before settlement. If the person who has filed a homestead claim wishes to get a patent before the end of five years he can do so by paying as much as it would have been sold for to a pre-emptor.

The declaratory statements need no witnesses; and the affidavits are all taken by the land officers without charge. It is not necessary to employ a lawyer unless there is a dispute about the land. The chief expense is in going to the land office with two witnesses.

The Public Lands of California.

According to the United States surveys and estimates, California contains 188,981 square miles, or 120,947,840 acres; of which 30,408,426 acres have been surveyed, and of these 16,409,422 have been disposed of by the Federal Government before the first of July, 1868—the latest date to which we have a report. For schools and educational purposes 6,765,404 have been granted; 6,030,814 have been taken under Mexican grants; 500,000 have been granted for internal improvements, 116,382 for railroads and 6,400 for public buildings; 1,198,874 have been sold, 368,321 have been taken under the Homestead Act, 470,452 under military warrants, 580,572 under "scrip," 343,169 under swamp locations, and 28,129 under Indian scrip. Since June, 1868, nearly 2,000,000 acres more have been disposed of, and 86,000,000 acres of public land in the State are open to occupation. There are 50,000 square miles in the coast valleys and mountains, 50,000 in the Sierra Nevada, 30,000 in the low land of the Sacramento Basin, 30,000 in the Utah Basin, which has no outlet to the sea, 20,000 in the basin of the Colorado River, and 8,000 in the basin of the Klamath.

Much land in Utah and Colorado basins, three-fourths of that in the Sierra Nevada and Klamath basins, and a third of that in the Coast District may be considered as too rugged or barren to pay for cultivation in this century, with the exception of small patches. There remain 30,000 square miles in the Sacramento Basin, 32,000 in the Coast, 12,500 in the Sierra Nevada, and 2,000 in the Klamath Basin; an aggregate of 95,000 square miles, or 88,000,000 acres, as available for tillage—half of it still belonging to the Government. No precise measurements have been made, but these figures are near enough to give a correct general idea. The area valuable for pasturage but unfit for tillage is half as great.

The acres of land inclosed number 5,261,000, or about one in sixteen of that suitable for tillage; but only 2,658,000, or one in thirty-two, are tilled. The quantity held in private ownership is not known precisely, for large purchases which have not been reported have been made lately; some Mexican claims are not yet finally settled; and some railroad donations have not been perfected.

To the Central Pacific Road, 1,394,000 acres have been granted; and to the Western Pacific, an area which probably does not exceed 500,000 acres of federal land. The companies have complied with all the conditions of these grants, and have, or soon will have, the patents. The California and Oregon Railroad Company are to have about 2,800,000 acres; but only a small part of the road is built. The Copperopolis Railroad is entitled to 230,000 acres, if built within the period fixed by law. The Southern Pacific Railroad claimed 6,000,000 acres, but has not built the road so as to perfect the claim. We have here a total of 10,424,000 acres claimed by railroad companies.

The area of the confirmed Mexican land claims is 6,000,000 acres.

The most fertile land and that nearest to the market is occupied. The present settlers are men of more than ordinary intelligence, and they have sought to get the best. Nearly all the level bottom lands in the coast valleys, from Lat. 39 deg. to the southern boundary, are taken up, and so are the best parts of the low lands in the Sacramento Valley within one hundred and fifty miles of San Francisco, and of the San Joaquin Valley within seventy-five miles of Stockton. All the land on which it is supposed that grain can be grown with a profit, at present, have passed out of the control of the Government. But the future profit depends to a great extent upon the means of transportation, and large districts that are now too far from market will become valuable when they shall have been made accessible by railroads.

Many districts also may pay well when supplied with water by irrigation; and many others without irrigation may pay better in grapes and various fruits than any grain fields.

It is my confident belief that the hills will pay better in wine, dried fruit, preserved fruit, fresh fruit and nuts, than the low lands will in grains.

Nearly all the land belonging to the United States is offered for sale at \$1.25 per acre, and is called "minimum;" but in some places all the odd sections within ten or twenty miles of a railroad have been given to the road, and then the even sections are not sold for less than \$2.50 and they are called "double minimum" lands; and the pre-emptor and homesteader cannot take more than eighty acres of them.

It is impossible to explain here all the details of the federal land system, but I have given the main points, and the others can readily be learned by inquiry of intelligent farmers in those districts where there are public lands for sale. At least forty out of the fifty counties have some public lands, which can be got for \$1.25 per acre; but near the center of the State this unoccupied land is usually hilly or covered with brush, so as to diminish its value. Good grape or grain land in the coast valleys within sixty miles of the Bay of San Francisco is generally worth from \$20 to \$100 per acre—the price being higher in proportion to proximity to navigable water. In the Sacramento and San Joaquin valleys, fertile land not subject to overflow ranges from \$5 to \$20 per acre, except near the larger towns, where it is higher. The prices in Los Angeles County are about the same, except that in the latter county lands that can be irrigated command a higher figure.

Land Titles.

Land is usually sold in California, not by warrantee, but by "bargain and sale" deed, conveying, by the words "grant, bargain and sell," which imply and covenant that the grantor has not previously sold the land or permitted it to be incumbered in any way since it came into his hands. It warrants that he gives as good a title as he got. But as to the value of the title when the grantor received it, the grantee must take the risk. It is the custom for the grantor to provide an abstract of title, made by a professional searcher; or the grantee gets the abstract, and if it is not satisfactory the grantor takes it and pays for it. The abstract is submitted to a lawyer, and land should not be purchased without this precaution; and, with it, the grantee is safe. A poor man should not buy land the title of which is not clear, and he should always stipulate that the search is to cost him nothing if the title is not clear. It is bad policy to buy in a hurry. The broker will often say that somebody else wants the piece, but that is only a trick to induce an inexperienced man to buy quickly. The buyer should always find out what other lands are for sale in the vicinity, ascertain their prices, compare their situations and advantages, and thus make certain that the bargain when closed is a good one.

The Extreme Northern Mining Counties.

The mining counties at the northern end of the State are Klamath, Del Norte, Trinity, Siskiyou and Shasta, between Lat. 40 deg. and 42 deg. The first three are very mountainous, and have only a small area of land capable of cultivation. In the eastern end of Siskiyou there are some excellent natural pastures. Del Norte and Klamath front upon the ocean, and have valuable forests of redwood. The California and Oregon Railroad will run through Siskiyou and Shasta. The latter county has some fertile unoccupied land, which will probably rise much in value when made accessible by railroads. I head this paragraph "The Extreme Northern Mining Counties," because the term "Northern Mines," is frequently applied to all the mining counties north of Amador.

The Main Belt of Mining Counties.

The main belt of gold mining counties, extending from Lat. 40 deg. 30 min. to 37 deg. on the western slope of the Sierra Nevada, consists of Plumas, Sierra, Butte, Nevada, Placer, El Dorado, Amador, Calaveras, Tuolumne and Mariposa counties. The first two are very mountainous over their entire area, nearly all their surface being more than four thousand feet above the sea; the others have their eastern borders high up in the mountains and their western low enough to include much land valuable for agriculture. All of these counties have fine forests of pine and fir between the altitudes of three thousand and six thousand feet; and the gold mines range generally from one thousand to three thousand feet. The Beckwourth Pass Railroad will run for seventy miles through the middle of Plumas, which has a large extent of deep beds of auriferous gravel that will not be exhausted for many years to come, and also rich beds of iron. Butte,

adjoining Plumas, though classed as a mining county, depends chiefly for the support of its population on agriculture. Its Western border reaches to the Sacramento River. The Beckwourth Pass Railroad will run for twenty-five miles in the county. The Northern California Railroad connects the county seat, Oroville, with Marysville, and through that place with Sacramento and Vallejo; and the California and the Oregon Railroad will run thirty miles through the western part of the county. Butte is rich in pine forests, which yield considerable quantities of resin and turpentine. Nevada is the most populous and prosperous of the mining counties. It includes Grass Valley, the chief center of quartz mining; and the Blue Lead, a deposit of rich auriferous gravel in the bed of a dead river, extends across the county and yields considerable quantities of gold to hydraulic and tunnel miners. There are some mulberry plantations in the western part of the county. The Central Pacific Railroad runs seventy miles in Placer County, and takes half of the fine timber in the higher districts, and also in the adjoining counties of Nevada and El Dorado. The discovery of gold in 1848, by Marshall, was made in the latter county, but now the placers are nearly exhausted; quartz mining rarely was profitable, and a majority of the people are turning their attention to agriculture. The lower parts of the county are well adapted to horticulture; and vineyards and orchards abound, though there is still room for many more. El Dorado is directly east of Sacramento, and has the main wagon road leading across the Sierra.

Amador also has a wagon road across the Sierra, but there is very little travel on it. The Mother Lode, or great quartz vein of the State, reaches into Amador, and is very rich at the Amador, Oneida, Keystone and several other mines, which form a cluster ranking next in productiveness at present to Grass Valley.

The Mother Lode also runs through Calaveras, and some of its mines have been very profitable, but none is yielding much more than enough to cover expenses at present. The most productive quartz mines of the county are on small veins east of Mokelumne Hill. In the western part of Calaveras there is a belt of copper, in which some large deposits of rich ore have been found. There are also beds of slate, manganese and iron ore. The most accessible grove of Big Trees is in this county.

Tuolumne produced, in early times, more large nuggets of gold than any other part of the State. The Mother Lode passes through it, but does not produce much. There are, however, large deposits of rich auriferous quartz, and they will be worked at a profit at some time not far distant. Tuolumne has several groves of Big Trees, a big chasm in the mountains similar to Yosemite, and a wagon road across the Sierra, with little travel over it.

Mariposa possesses the Yosemite Valley and the Mariposa Rancho, which last was sold for \$10,000,000 to a New York company. The rancho, when sold, was producing about \$100,000 monthly; but immediately after the sale the production declined rapidly and soon fell to nothing. But the mines are rich, and they are now again worked at a profit.

The Silver Mining Counties.

The silver mining counties are Alpine, Mono and Inyo; the first partly and the other two wholly east of the main ridge of the Sierra. They extend from Lat. 36 deg. to 38 deg. 40 min. Most of their area is more than four thousand feet above the sea, and they have many peaks rising to thirteen thousand feet. Mono Lake is in Mono County, and Owens Lake in Inyo. The latter county has a large number of lodes of rich argentiferous galena, which is now reduced at a profit by smelting. The chief center of the mines is Cerro Gordo.

The Northern Coast Counties.

The northern agricultural coast counties, commencing at the north, are Humboldt, Mendocino, Sonoma and Marin, fronting on the Ocean, and Napa and Solano, fronting on San Pablo and Suisun bays, and Lake, north of Solano. The first two are composed mostly of government land, which will become very valuable when the railroad from Vallejo or Saucelito is built to Humboldt Bay. The rainfall is greater here than at San Francisco. Sonoma, Napa and Solano contain some of the prettiest and most fertile valleys of the State, and the last two are already well supplied with railroads. Lake has valuable deposits of quicksilver, sulphur and borax.

The Southern Coast Counties.

The southern coast counties, commencing at the south, are San Diego, San Bernardino, Los Angeles, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Mateo, San Francisco, Santa Clara, Alameda and Contra Costa. The last three front on San Francisco Bay, and the rest, save San Bernardino, front on the Ocean. All have some of their territory, and most of them have all of it, west of the main ridge of the Coast Mountains. The most fertile lands in all these counties are held under grants made by Mexico, and large quantities have been bought of late from the Federal Government. In San Luis Obispo and the counties farther south, there are large areas of good soil, open to pre-emptors and homestead claimants. From Santa Barbara to San Diego there is less rain than farther north. Timber suitable for fencing or houses is scarce, save in the mountains. Excepting a small railroad twenty miles long at Los Angeles, there is no railroad in the State south of Santa Clara County; but there must be a coast line, and it will do much to develop many resources now neglected.

The San Joaquin Valley.

The San Joaquin Valley counties, commencing at the south, are Kern, Tulare, Fresno, Merced, Stanislaus and San Joaquin. In so large a district there is, of course, a great variety in the character of the soil. Portions near the San Joaquin River and in the vicinity of Stockton, have a deep, black, waxy or "adobe" soil, which is very productive. Nearer the foothills the land is gravelly. Other districts have a light, sandy loam, which is cultivated with very little labor and has yielded fine crops, often enabling farmers to pay for their lands in one or two years. The quantity of rain that falls is less than in the coast counties.

There is very little timber, so that no expense is incurred in clearing the land. There are also large quantities of "tule" or overflowed lands immediately along the river, much of which can readily be reclaimed, and will then form one of the most productive portions of the State. Large tracts of the fine lands of this immense valley have been taken up under the land laws of the United States within a few years past, by capitalists who were aware of its desirable location and great prospective value. They are, however, offering farms and large tracts for sale to actual settlers at from three to five dollars an acre, and on easy terms as to credit. But there is still a large area open to purchasers and settlers. A railroad to run from Stockton to Visalia will pass through all the counties, save Kern.

[Concerning this valley, see remarks of the Surveyor-General, and extract from speech of Dr. E. S. Holden, elsewhere.]

The Sacramento Valley.

The Sacramento Valley counties, commencing at the north, are Tehama, Colusa, Yolo, Yuba, Sutter and Sacramento. Shasta, Butte and Placer, classed among the mining counties, have some valley land. The soil of the Sacramento Valley is mostly a fertile, gravelly clay or sandy loam. About one million acres along the banks of the river and the mouths of its lower tributaries, are "tule" or swamp lands; and immediately in the rear of these, the low, level lands that are dry during ordinary seasons are subject to overflow in times of flood. This is for the want of a comprehensive plan of levees and canals, to keep the river within its banks or relieve it of surplus waters when necessary. Plans for this purpose are under consideration in Congress, and have been recommended to the State Legislature, but not yet acted on. In the mean time, detached tracts and districts of these overflowed lands, and the adjoining lands subject to occasional overflow, are being protected by levees and embankments extending out from the foothills, the cost of which is defrayed by *pro rata* assessments upon the lands benefited. When thus protected or reclaimed, such lands are among the best and most profitable to cultivate, since the soil is a deep alluvium, and its natural moisture renders a failure of crops unknown.

In the southern part of the valley the land is mostly taken up; in the northern part much of it still belongs to the Government. The California and Oregon Railroad will run through Sacramento, Placer, Yuba and Tehama, besides other counties; the California Pacific runs through Yolo and Sutter; and the valley is so situated that a number of other railroads must run through it.

Lassen, in the Sierra Nevada and most of it east of the main ridge, is a farming county, nearly all of it more than four thousand feet above the sea. The people supply poultry, eggs, butter, vegetables and grain, to Nevada.

Wages.

Wages are high in California. The best statement of the rates is found in the reports of the California Labor Exchange, which furnishes employment to about one thousand persons per month. The report made in June last, says:

"The truth is clearly that the supply of laboring people has not been and still is not sufficient to meet the necessities of the country, and that our laboring classes are the most prosperous and ought to be the happiest people in the world. The demand, it will be further observed, has been practically for common laborers, farmers, carpenters, miners, blacksmiths, cooks, boys, etc. Servants, who only command about \$40 or \$50 a year in Great Britain and on the continent of Europe, have been eagerly engaged here at the rate of \$20 to \$40 per month as fast as they have offered."

During the fourteen months preceding June, 1869, employment was furnished to eighteen thousand six hundred persons, and among them were laborers of the following classes:

Occupations and Terms.	Wages.	Number Employed.
Bakers, per month and found.....	\$30 00 @-\$40 00	46
Barbers, per month	80 00	13
Bellhangers, per day.....	2 50 @ 3 00	2
Belt Makers, per day	2 00 @ 2 50	2
Blacksmiths, per day.....	2 50 @ 4 00	
" per month and found.....	60 00 @ 100 00	350
Blacksmiths' Helpers, per day.....	2 00 @ 2 50	42
Boot Blacks, per month	45 00	3
Boys, per month.....	10 00 @ 30 00	496
Bricklayers, per day	4 00 @ 4 50	143
Brewers, per month.....	50 00	1
Broom Makers, per day	2 50 @ 3 00	4
Butchers, per month and found.....	35 00 @ 60 00	52
Butter Makers, per month and found.....	35 00 @ 40 00	9
Brick Makers, per month and found	35 00 @ 50 00	3
Coachmen, per month and found.....	30 00 @ 40 00	18
Coffin Makers, per day	2 50 @ 4 50	2
Confectioners, per month and found.....	40 00 @ 60 00	4
Cooks, per month and found	35 00 @ 100 00	497
Cooks in private families, per month and found.....	30 00	
Cooks in hotels, per month and found	40 00	
Coopers, per day	2 00 @ 3 25	34
Coppersmiths, per day	3 00 @ 4 50	8
Tanners, per day	3 00 @ 3 25	
" per month	50 00 @ 60 00	12
Cabinet Makers, per day.....	2 00 @ 3 50	87
Carpenters, per day.....	3 00 @ 4 00	1445
Carriage Painters, per day	3 00 @ 4 00	32
Carriage Builders, per day.....	2 50 @ 4 00	8
Caulkers, per day.....	3 00 @ 4 00	1
Charcoal Burners, per month and found.....	35 00	3
Cheese Makers, per month and found.....	30 00 @ 40 00	3
Clerks, per month and found.....	40 00 @ 75 00	26
Dairymen, per month and found	30 00 @ 40 00	193
Deck Hands, per month and found.....	40 00	12
Dish Washers, per month and found	20 00 @ 30 00	166
Door Makers, per day	2 50 @ 4 50	8
Druggists, per month and found.....	60 00	2
Dyers, per month and found.....	40 00 @ 50 00	1
Farm Laborers, per month and found, in winter.....	30 00	
" " " " in summer	40 00 @ 50 00	1762
Gardeners and Grooms, per month and found	30 00 @ 40 00	100
Gas Fitters, per day.....	3 50 @ 4 50	3
Gunsmiths, per day.....	3 00 @ 5 00	3
Harness Makers, per month and found	40 00 @ 65 00	36
House Painters, per day.....	2 50 @ 4 00	182
Iron Moulders, per day.....	3 50 @ 4 00	16
Laborers, Common, per day.....	2 00	
" " " per month and found	30 00 @ 35 00	4694

Occupations and Terms.	Wages.	Numb. Employ. 1
Laundresses, per month and found.....	\$30 00 @ \$35 00	....
Locksmiths, per day	3 00 @ 4 00	5
Lumbermen, per month and found.....	30 00 @ 50 00	271
Machinists, per day	3 50 @ 4 50	54
Masons, per day	4 00 @ 5 00	51
Millers, per day	3 00 @ 4 00	8
Millwrights, per day	3 00 @ 5 00	6
Miners, per day and found.....	2 00 @ 3 50	321
" per month and found.....	40 00 @ 65 00	
Nurses, per month and found	25 00 @ 35 00	12
Ostlers and Teamsters, per month and found	30 00 @ 50 00	58
Paper Hangers, per day.....	2 50 @ 3 50	2
Pattern Makers, per day.....	4 00 @ 4 50	5
Plasterers, per day.....	4 00 @ 5 00	48
Plumbers, per day		5
Porters, per month and found	30 00 @ 55 00	22
Sawyers, per month and found	40 00 @ 75 00	56
Seamstresses, Nurses and Chambermaids, per month and fnd.	20 00 @ 25 00	...
Servants, general housework, per month and found	25 00 @ 30 00	...
Shepherds, per month and found	25 00 @ 35 00	60
Shipsmiths, per day.....	3 00 @ 4 00	10
Soap Makers, per month and found.....	35 00 @ 40 00	4
Stone Cutters, per day.....	4 00 @ 5 00	1
Track Layers, per day.....	1 25 @ 2 00	157
Turners, per day.....	3 50 @ 4 00	10
Upholsterers, per day.....	3 00 @ 4 00	10
Vineyard Men, per month and found	30 00 @ 40 00	25
Wagon Makers, per day	3 00 @ 4 00	34
Waiters, per month and found	20 00 @ 40 00	287
Watchmen, per month.....	50 00 @ 75 00	7
Wood Choppers, per month and found	40 00 @ 50 00	825

Employment was furnished to 4,021 women.

The wages above given are those paid in May, 1870. The best workmen could generally get employment without the assistance of the Labor Exchange.

Mechanics who work by the day get from \$2.50 to \$6.00 per day; and common laborers get from \$1.50 to \$2.50 per day, or from \$25 to \$40 per month.

The wages of Chinamen are seventy-five cents or one dollar a day, if they find themselves, or from eighteen to twenty-five dollars per month if they are found. Those who are "found," (or lodged and fed), usually understand some English and have skill which the others have not.

All the prices mentioned are gold, and they are from twenty to two hundred per cent. higher than the wages paid to the same classes of laborers respectively in New York.

It is much easier to get employment in rough or mechanical work than in clerking or keeping books; and persons who have no money and no friends in California able to assist them, and no special knowledge that will certainly command employment, should not come here in the expectation of an easy life. Men who expect to make their living by the shovel, the plow and the ax, are wanted.

The Business of San Francisco.

There are in this city five thousand landholders and twenty-nine thousand depositors in the savings banks, and few cities can show a larger proportion of

either. The hotels of San Francisco, according to many travelers, are unsurpassed in excellence of their tables and the care of general management. Many of the buildings are fine specimens of architecture. The majority of the people live in more comfort and luxury than those of any other city in the world.

The number of vessels which arrive annually at San Francisco is about three thousand four hundred, and they measure about 1,100,000 tons. In the value of foreign merchandise imported, San Francisco ranks next to New York and Boston, surpassing Philadelphia, Baltimore and New Orleans.

The annual export of treasure, including the silver of Nevada, is \$40,000,000, and of merchandise produced on the coast, \$23,000,000. In the term "merchandise," as here used, I include grain, ore, quicksilver, hides, and similar articles. Among the merchandise exports of 1869 were the following values: Wheat, \$8,734,348; flour, \$2,058,919; wool, \$2,370,165; quicksilver, \$747,671; furs, etc., \$635,533; hides, \$371,346; leather, \$216,966; copper ore, \$117,133; wine, \$499,628; barley, \$338,788; mustard seed, \$44,369; salmon, \$180,367; brandy, \$209,610; potatoes, \$29,893; tallow, \$9,708; bread, \$34,083; beans, \$12,022; borax, \$321; abelones, \$5,425; oats, \$45,280; silver ores, \$135,298; bran, \$8,700; and brooms, \$6,875.

The annual exports of California are \$100 to the person; while the exports of the United States are about \$10, and of Great Britain about \$20 to the person. The annual imports of California are about \$60,000,000.

The Banks, Savings Banks, Insurance companies, Gas Company, Water Company, State Telegraph Company, Steam Navigation Company, and Street Railroad companies, of San Francisco, together pay out about \$5,000,000 annually of dividends. There are ten savings banks which have together \$27,000,000 on deposit, and pay from nine to twelve per cent. per annum interest to the depositors. The Courts enforce every agreement for interest, no matter what the rate. In case no rate is fixed by the parties, the legal rate is ten per cent. per annum. Loans are usually made by the month, and the common rates are from ten per cent. per annum to one and one-half per cent. per month. Interest is higher in the country than in San Francisco, and higher in the mines than in the agricultural districts.

The amount of gold and silver coined annually in the San Francisco Mint is about \$22,000,000.

The prosperity of California is implied by the taxes paid. The assessed value of property is \$527,000,000, and the average rate of assessment is about one-half of the market value, so that the total true value is \$1,054,000,000 or \$1,506 to each of the 700,000 inhabitants. The assessed value of San Francisco property is \$212,000,000, more than two-fifths of that of the entire State of which it has about one-fourth of the inhabitants.

Population and Products of California.

No accurate census of the population of California has ever been taken. The incorrect United States census of 1860 reported the number of inhabitants as 365,493; the number reported now by the Surveyor-General is 693,609.

There are about 170,000 voters, who represent 530,000 whites, and there are about 70,000 Chinamen, Indians and Negroes.

The State produces about 26,000,000 bushels of wheat, 8,900,000 of barley, 1,600,000 of oats, 39,000 of rye, 1,000,000 of maize, 13,000 of buckwheat, 82,000 of peas, 167,000 of peanuts, 150,000 of beans, 233,000 of castor beans, 1,400,000 of potatoes, 75,000 of sweet potatoes, 91,000 of onions, 495,000 tons of hay, 570,000 lbs. of hops, 90,000 lbs. of tobacco, 29,000 tons of beets, 5,000,-000 lbs. of butter, 3,000,000 lbs. of cheese, 500,000 lbs. of honey, 4,000,-000 gallons of wine, 300,000 gallons of brandy, 220,000,000 feet of sawn lumber and 100,000,000 shingles annually.

It has 28,000,000 grape vines, 406,000 mulbery trees, 1,800,000 apple trees, 1,000,000 peach, 300,000 pear, 200,000 plum, 140,000 cherry, 43,000 nectarine, 40,000 quince, 98,000 apricot, 54,000 fig, 10,000 lemon, 72,000 orange, 20,-000 olive, 14,500 prune, 162,000 almond, and 109,000 walnut trees; 10,000,000 strawberry vines, 1,400,000 raspberry, and 172,000 gooseberry bushes, 209,000 horses, 24,000 mules, 500,000 neat cattle, 2,200,000 sheep, 7,000 Cashmere goats, 412,000 hogs, 1,500,000 chickens, 150,000 turkeys, 25,000 geese, 80,000 ducks, 32,000 beehives, sixty-two steam grist-mills, two hundred and five water-power grist-mills, two hundred and seven steam saw-mills, one hundred and sixty-one water-power saw-mills, three hundred and sixty quartz-mills, eight hundred and seventy-four mining ditches, with an aggregate length of 12,000 miles, and seven hundred and twenty irrigating ditches, which irrigate 70,000 acres.

Manufactures

The factories of California are few and small, relatively. High wages make it impossible to compete successfully with the cheaper labor of the Eastern States and Europe except in a few articles, most of which are bulky in proportion to cost or inflammable.

We make blankets, flannels and cheap cloths, because we have an abundance of fine wool, on which by working it up here we can save freights to and from New York, three or four commissions, and ten months' time. Yet we export more than three-fourths of our wool, and import all our fine cloths, delaines and worsteds. On the same principle we tan hides and make coarse boots; but we export hides and sole leather and import fine boots, calf-skin and morocco. Furniture, tubs and coarse baskets are made here. Hemp rope is manufactured here because the material comes from Manila, and can be got here cheaper than in New York, and the freight is high as compared with the cost. Printing paper we make because we have rags to export. Straw paper is very bulky and cheap and is made here. Turpentine is inflammable and costly to freight, so we produce it from the pitch of our forests. Resin is made because its production costs very little when turpentine is distilled. We have an abundance of broomcorn and on account of the luxuriant growth of the plant can make brooms cheaper and much better than those imported. The refuse of our slaughter-houses furnishes cheap material for coarse soap and glue, which we make in abundance. Coarse pottery and tin and copper-ware tan be made for less

than the freight from New York. Common matches, acids, blasting powder, and giant powder or dynamite, are so dangerous to ship that the high freights protect production on our coast. Shot and lead pipe are made from lead obtained in Nevada and Arizona. The old wrought-iron, which was formerly exported, is now sent to our rolling mill, which obtains its material cheaper than do similar establishments in the Eastern States. The salt obtained on our coast is ground, and the rice imported for our Chinamen is cleansed, in San Francisco mills. The sugar from the Hawaiian Islands is refined here for the consumption of the coast. The coarse bottles are made at home, but the fine ones are imported. The wire rope which is made to the order of the miners is twisted here. One cotton mill makes coarse muslin. A silk weaver has commenced work in San Francisco, and he will probably thrive by confining his operations to a small scale for several years. We make one hundred billiard tables and one hundred and fifty pianos annually. The tables cannot be transported entire, and it is cheaper to make them here than to import them. Planing mills and sash factories, of course, we have; and the Chinese have gone extensively into the making of cigars.

The facts which I have stated show that there is room for a great development of manufactures on the coast, and those persons who establish themselves here so as to take advantage of the turn of events as soon as it comes, will be in a fair way to make fortunes. The building up of extensive mechanical industry is inevitable. The great distance of California from the North Atlantic will make continued importation of many manufactured articles impossible, and the high tariff, which, on account of the immense debt, must be maintained many years, will be an additional protection.

The manufactures of California are now nearly all in San Francisco, and are driven by steam; but there is an abundance of water-power along the base of the Sierra Nevada, and there are many unoccupied sites for steam factories better than any now in use.

According to the United States Census Report of 1860, California had, in that year, 3,505 manufacturing establishments, with a capital of \$23,682,593, employing 24,266 persons, consuming raw material worth \$16,558,636, and producing manufactured articles worth \$59,500,000.

The additional value given to the raw material by the manufacturers was \$42,912,000. Flour and lumber are the two largest items, and, together, make up more than \$8,500,000 of manufactured product, and malt and distilled liquors made \$1,500,000 more. Since 1860, there has been a great increase of manufacturing industry, and many articles then imported are now made here, including tallow, boots, shoes, woodenware, candles, many varieties of furniture, gas meters, glass, hose, belts, glue, lasts, linseed oil, matches, saws, sashes and doors, tools, type, vinegar, and wire goods. Santa Cruz has a number of tanneries. Santa Cruz and Marin counties have each a powder mill and a paper mill; Oakland has a cotton mill; Sacramento a beet-sugar mill; Sacramento, Marysville, Stockton, San Jose and Merced Falls, have each a woolen mill; every large town has its planing mill, foundry and brewery; and distilleries, and flour, saw and

quartz mills, are scattered through the respective grape, grain, lumber and mining districts. But, with these exceptions, nearly all the manufacturing establishments are in San Francisco. The following is a list of those in the city, with the number of men employed in each branch, as reported in 1869 by the Assessor: Axle-grease factory, 1 man employed; bellows factory, 1; billiard tables, 22 men employed; boxes, 69; brass foundries, 85; boots, 122; breweries, 153; wooden-ware, 66; candles, 11; acid, 15; cigars, 1,232; cordage, 50; flour, 134; furniture, 138; gas meter, 4; glass blowing, 86; glass cutting, 6; gold and silver refining, 5; hats and caps, 26; hose and belts, 17; foundries and boiler shops, 1,093; windows, 84; glue, 20; lasts, 4; lead pipe and shot, 18; linseed oil, 8; malt, 18; matches, 43; mirror silvering, 5; piano fortés, 19; fireworks, 4; rolling mill, 58; salt grinding, 35; saw making, 35; sash and doors, 261; saw and planing mills, 380; soap, 54; staves, 22; marble sawing, 28; sugar refineries, 264; tanneries, 122; tools, 5; trunks, 30; type, 35; tubs, 20; vinegar, 6; wine 12; woolen mills, 750; total men employed, 5,786.

The values of the articles manufactured are reported thus in a few branches: Bellows, \$10,000; boxes, \$200,000; brass work, \$143,000; boots, \$160,000; furniture, \$170,000; gas meters, \$4,000; glass cutting, \$8,500; lasts, \$7,000; mirrors, \$20,000; fireworks, \$7,000; saws, \$70,000; sashes and doors, \$773,000; tools, \$5,500; trunks, \$37,000; type, \$28,000; wire, \$25,000.

Among the quantities of certain articles manufactured, the following are reported: Billiard tables, 97; malt liquors, 3,600,000 gallons; candles, 15,000 boxes; cigars, 38,000,000; cordage, 1,500 tons; flour, 529,000 barrels; gold and silver, refined, 1,500,000 ounces; foundries and boiler shops, 11,600 tons iron; iron doors, 1,100 tons iron; lead pipe and shot, 1,100 tons; linseed oil, 25,000 gallons; matches, 95,000 gross; pianos, 152; salt, 7,300 tons ground; lumber, 24,000,000 feet sawn; soap, 4,000,000 pounds; sugar, refined, 20,000,000 pounds; leather, 16,000 hides; vinegar, 86,000 gallons.

Climate.

One of the most important elements of the wealth of California is its magnificent climate, which along the coast south of Cape Mendocino, may be described as an eternal spring. In San Francisco the roses bloom throughout the year in the open air; and the olive, fig, orange and a multitude of other semi-tropical fruit trees, thrive and bear fruit one hundred miles further north. The fecundity of some orange trees at Sacramento, which bore abundantly in November, 1869, has induced several persons to plant out a number of trees. It is a very rare event to see ice in San Francisco, and it does not form a quarter of an inch thick once in five years. The ground has not been white with snow in ten years, and the snow never lay on the ground twenty-four hours without melting; nor does the thermometer ever remain for twenty-four continuous hours below the freezing point. The same reasons that induce hundreds of thousands of the natives of Northern Europe to visit the shores of the Mediterranean every year, will drive the people of the colder portions of the North American Continent to resort to California. In clearness of sky and mildness, and equality of temper-

ature, our coast surpasses Italy and it will therefore be more attractive. The long shore of Southern Europe, from the Bosphorus to Gibralter, has a mild climate, so that the pleasure seekers in Europe can enjoy it in any one of half a dozen kingdoms; but here the area of comfort is more restricted and the profit in that area must be greater. California occupies for America and Eastern Asia the same place that the Mediterranean coast does for Europe.

The Pacific shore of North America is washed by a warm current that runs northeastward from the Phillipine Islands; and so Washington, Oregon and California, near the coast, have much milder climates than the States in the same latitude on the eastern side of the Continent. California has many climates. The coast is divided into three districts—by Cape Mendocino, in Lat. 40 and Point Concepcion in Lat. 34.

North of Cape Mendocino, the rains occur frequently in the late spring and summer; the amount of rainfall is fifty per cent. greater than at San Francisco; the fogs are much heavier and longer in duration; the winds are stronger and the temperature generally is colder.

South of Point Concepcion there are no steady breezes and fog but seldom; the rainfall is thirty per cent. less than at San Francisco, and the summers are often oppressively hot, even very near the ocean.

The middle coast has an average annual temperature of fifty-four degrees, January averaging forty-nine degrees and July fifty-seven degrees, a difference of only eight degrees. The weather is uncomfortably cold at forty-five degrees and uncomfortably warm at seventy-five degrees, and never did the average of any week in San Francisco reach either figure, although sometimes the thermometer has fallen to thirty-two degrees and risen to eighty degrees. Ice and snow are never seen in the streets. On the twenty-ninth of December, 1856, snow covered the hills about the city for a few hours in the morning, but there was not enough even for snow-balling. There are not more than a dozen warm days in a summer; never a warm night. During July and August, strong northwest trade-winds blow regularly along the coast, and they bear the coolness of the ocean over the land. In the evening and morning they cause heavy fogs, which disappear about ten A.M. and eleven P.M. These fogs and winds are often made the subjects of unfavorable comment by strangers, but they give to San Francisco the most equable climate in the temperate zone. New York is eighteen degrees, London twelve degrees and Naples three degrees, colder in January; and New York fifteen degrees, London five degrees and Naples nineteen degrees, warmer in July. (Better wind and fog than freezing cold and torrid heat.) No climate can be more favorable to labor and life in the open air than that of San Francisco. The constant coolness invites activity and even requires it as a condition of comfort.

As we leave the ocean and go inland, the influence of the trade-winds decreases and the heat of summer and cold of winter increase. The sea-breezes make the winters warmer, as well as the summers cooler. At Sonoma, twenty miles from the ocean and at Sacramento, ninety miles from the ocean, January is four degrees colder and July is at the former place nine, and in the latter sixteen

degrees warmer than in San Francisco. The ocean breezes seem to lose their influence over the winter at twenty miles from the ocean, but their influence over the summer weather extends much further inland. Sacramento is near the central windgap of the Golden Gate, whence the breezes blow into the interior basin; and the temperature of July is seventeen degrees less there than at Fort Miller and nine degrees less than at Fort Reading, which two points are near the southern and northern extremities of the basin, respectively.

In the Sierra Nevada, the element of altitude comes in to affect the climate and especially to prolong and intensify the winters. The higher portions of the Sierra rise to the limits of perpetual snow, and the climate there is of course arctic in its severity, the thermometer falling below the freezing point every night in the year. The mining camps are mostly situated in deep ravines, where the wind has little opportunity to blow, and the heat of summer in midday is very oppressive, even at an elevation of five or six thousand feet, but the nights are always cool. At Grass Valley, in Lat. 39 deg., two thousand five hundred feet above the sea, the average of January is twenty-seven degrees, and of July sixty-three degrees. At Fort Jones, about the same altitude, in Lat. 41 deg., the temperature of January and July are about the same. Between the mountains and the valleys, the coast and the interior, the north and the south, we have every variety of climate save the tropical. Thunder-storms are almost unknown on the coast, and are not frequent in the Sierra Nevada.

Rain seldom comes between May and October, which period is called the dry season, the remaining months being the rainy season. The amount of rain however, that falls in a year in the central and southern valleys of the State, is considerably less than in the Eastern States. At San Francisco, for instance, the average rainfall is twenty-two inches, while in New York it is forty-three, in St. Louis forty-one and in New Orleans fifty. As a general rule the amount of rain increases in California with altitude and latitude. Thus, at Fort Yuma the average rainfall is four inches; at San Diego, ten; at Stockton, fifteen; at Sacramento, twenty; at Fort Reading, twenty-nine; at Sonora, thirty-five; at Grass Valley, forty, and at Fort Humboldt, thirty-four.

General Features of Californian Farming.

The farming of California is unlike that of the Eastern States and Europe. The peculiarities of climate and business exercise a great influence on the agriculture. Little maize is cultivated; no barns are used; little shelter is provided for domestic animals, and little cultivated food is prepared for them; there is no customary rotation of crops; plowing is not possible till after the rains of winter have softened the earth; the amount of land seeded depends, to a great extent, on the earliness of the rains. A considerable share of the grain is raised in volunteer crops. The yield of grain is larger to the acre; and gang-plows are used to a considerable extent. Irrigation is common. Fruit trees grow more rapidly, and bear earlier than in the Atlantic States. Wine, silk, olives, prunes and nuts, promise to occupy a very prominent place among our productions.

Wheat.

Wheat is cultivated more extensively than any other grain, and about one-fourth of the cultivated land is devoted to it. In 1869, according to the report of the Surveyor-General, one million two hundred and eighty-six thousand one hundred and thirty-three acres of land in California was sown in wheat. The average yield in favorable seasons is thirty bushels per acre. In many instances, sixty and seventy bushels have been grown to the acre, and in several cases, eighty bushels. The berry is large, plump, hard, dry, white and strong, with gluten. The Californian wheat is so hard that some mills abroad cannot grind it, not being prepared for it. It is so dry that it can be stored in bulk in large quantities and for long periods, without danger of sweating or molding. It can be safely shipped through the tropics, whereas wheat grown in moist climates, or flour made from it, would spoil. In whiteness, the Californian wheat is superior to that of Europe. The "strength" of wheat consists in a large proportion of gluten, which makes a tough dough and a loaf with a large proportion of moisture and small and uniform air-bubbles, so that the bread will weigh more in proportion to the flour used. In "strength," the Californian wheat is reputed to be the best in the world, though there is considerable difference in the growth of different districts in that respect. The districts which produce the strongest wheat are Santa Clara and the southern parts of San Mateo and Alameda Counties, and the valleys of Diablo, San Ramon, Amador and Suisun. The valleys of Santa Rosa, Pajaro, Salinas, Sonoma and Petaluma, are second rate; and the Sacramento, San Joaquin and Napa valleys, western San Mateo and northwestern Alameda, are third rate; but all of them are superior to the average wheat of the Atlantic States.

The general estimate among farmers is that wheat will not pay at less than one dollar and sixty cents per one hundred pounds; but no general rule can be laid down, for the profit depends as much on the quantity as on the price. There is also a great difference in the cost of putting in wheat, some soils being much more difficult to manage. As a general rule, the cost of plowing and sowing may be put down at three dollars per acre; reaping and binding, two dollars; threshing, three dollars; sacks, three dollars, and rent or interest, five dollars—a total of sixteen dollars per acre. This is on the plan of letting the work out by the job; a good farmer who employs the best hands and superintends his own work can have it done cheaper. Twenty bushels or twelve hundred pounds to the acre, at one dollar and twenty-five cents per sack, would barely pay the sixteen dollars. On the smaller farms, the grain is put in precisely as it is in the Eastern States and it is harvested in the same manner, except that it is frequently left standing for weeks after it is ripe, as there is no fear of rain; and after being cut it is left in the shock, usually until the thresher comes; and after threshing it is left on the field, piled up in sacks, for weeks more, until the teamsters are ready to haul it away.

Sometimes the volunteer crops are better than the sown. This is especially the case in those districts where the soil is sandy or the amount of rain small.

In the sandy plains, on large farms, it is common to use gang-plows six abreast, drawn by twelve horses under charge of one driver. A sower is affixed to the plow. Nine acres is considered a good day's work. The grain is harvested by a header, which cuts a swath from fifteen to twenty-two feet wide, and cutting from forty to sixty acres per day, and throws the grain into attendant wagons, which carry it directly to a thresher, which sacks it ready for market. The gang-plows with sower attached, cost seventy-five dollars; the header costs four hundred and twenty-five dollars; the thresher and portable steam engine, two thousand dollars.

Barley is cultivated in the same manner as wheat, and produces a larger crop, but usually is worth less per pound in the market. Four hundred and sixty-eight thousand and seventy-six acres were sown with barley in 1869, according to the report of the Surveyor-General. Seventy-nine thousand and sixty-four acres of land were also sown with oats, of which the yield was stated at two million five hundred and sixty-eight thousand seven hundred and fifty-nine bushels.

The Grape.

The cultivation of the grape is one of the leading branches of Californian agriculture. The State has about twenty-five million vines in vineyard and two-thirds of them in full bearing. The amount of wine made annually is not reported with precision, but it is probably about four million gallons. The production of brandy amounts to about three hundred thousand gallons; and large quantities of grapes are eaten fresh. Many of the vines are very profitable, paying as much as five hundred dollars net per acre; and some even as much as two thousand dollars. The Flame Tokay vines bear occasionally twelve thousand pounds to the acre, and the grapes sell at wholesale for twenty cents per pound, making the gross yield per acre twenty-four hundred dollars, and the expenses are less than two hundred dollars. The White Tokay, the Muscat of Alexandria, the Black Malvoisie, the Golden Chasselas, the Rose of Peru, the Black Hamburg and the White Hamburg, all in places well adapted to them, and near San Francisco, have yielded more than two hundred dollars net per acre. The cheapest grapes are the Mission, and they have paid from fifty to one hundred dollars net per acre. Persons who have Muscat of Frontignan can probably sell the crop for several years at five hundred dollars per acre. The prospects of the vine-growing interest are brilliant and large areas are set out in grapes every year.

California has great advantages for wine growing. The vines bear very abundantly. The average crop is eight thousand pounds to the acre, while in France it is three thousand, and in Ohio, five thousand. This difference is an item of vast importance. The yield is much more regular in this State than in France or the Mississippi Valley, where frosts in the spring, hail in the summer, and rain in the fall, often destroy the crop.

In some parts of Germany the winters are so cold that the vines must be cut off near the ground every fall and covered with manure—an expensive labor.

The land suitable for vineyards in Europe costs several hundred dollars per acre, and in California it can be had for comparatively nothing.

The warmth of our winters saves the expense of fires during the period of fermentation.

There are, on the other hand, some disadvantages. Many of our wine growers are inexperienced, and do not know how to cultivate their vines, or make their wines in the best manner. Labor, casks, bottles, and transportation to the market, are dear. The interest of money is high and it is expensive to keep wine for years. The wine merchants have not yet established themselves firmly, nor can they get large supplies of wine of uniform quality; and uniformity is necessary to stability of market. These evils, however, will all be overcome, while the advantages will continue to operate in our favor.

The average crop of grapes on vines more than seven years old, is about eight thousand pounds per acre, and about thirteen pounds of grapes go to a gallon of wine, making six hundred gallons per acre. The lowest price of wine when six months old, well made, is twenty-five cents per gallon, leaving one hundred and fifty dollars per acre gross, and at least fifty dollars net. But the average prices in November, 1869, were for Los Angeles, of 1869, thirty cents; Anaheim, of 1869, thirty-five cents; Sacramento, of 1869, forty cents; White Sonoma, of 1868, forty cents; Red Sonoma, of 1868, forty-five cents; White Sonoma, of 1867, fifty cents; Red Sonoma, of 1867; fifty-five cents. All those are wines made of Mission grapes, and are the cheapest varieties. Sonoma Zinfandel, sold, of 1868, for seventy-five cents; mixed foreign, of 1868, sixty to seventy-five cents; Zinfandel, of 1866, ninety cents; Zinfandel, of 1867, eighty-five cents; Alexandrian Muscat, of 1869, one dollar; and of 1867, one dollar and twenty-five cents; Riessling, of 1868, eighty cents, and Frontignan Muscat, of 1868, one dollar. The best wines cannot be got at retail for less than three dollars per gallon.

It is the unanimous opinion of French and German wine growers now here, that California will in time make as good wine as any part of Europe. We produce excellent wines, similar to Port, Burgundy, Claret, Hock and Champagne, and as our wine-makers learn more of their business, the quality of their production is steadily improving.

Apples, Etc.

The apple, pear, peach, plum and cherry, all thrive and bear abundantly in California. The apples are larger than in the Atlantic States, but those grown near the sea do not keep so well and are not so juicy. The varieties eaten in the winter in New York will not keep later than fall here. Those grown in the Sierra Nevada, where the winters are cold, will keep as well in New England. The pears are much better than those of the Atlantic States. There are no worms in our fruits. The curculio is unknown. Cherry trees pay well, some having yielded one thousand dollars net per acre, in the spring of 1869.

The Olive.

The olive will be profitable in California. Our climate is very favorable to the tree, and the diseases which have injured European olive orchards have never appeared here. The tree is hardy and the crop sure; at least there has

never been a failure in the State. The trees are planted twenty-five or thirty feet apart, fifty or sixty in an acre, and they yield, in full bearing, from thirty to sixty gallons of oil per tree—worth, at present prices, in the orchard fifty cents per gallon; so that an acre of fifty trees, producing thirty gallons each, would pay three hundred and seventy-five dollars. Strike off fifty per cent. allowance for all possible over-estimates and depreciations, and we have a yield of one hundred and eighty-seven dollars, which would leave at least one hundred dollars net per acre. Imported oil, known to be genuine, is retailed at three dollars per gallon. The olive does not come into bearing until ten years after planting, and this long delay has been the only cause that the cultivation has not been undertaken on an extensive scale. In fifteen or twenty years, olive oil will be one of the staple productions of the State. A little oil is made now, but not enough for home consumption. The making the oil is comparatively simple, requiring nothing save pressing and straining; but the art of preserving the fruit is not so easy, and few persons in the State understand it. The Californian olives are not quite so large as those imported; and we rely almost exclusively on importation for our table olives.

The Orange, Lemon and Lime.

The orange tree lives in the open air in all the low interior valleys south of Lat. 39 deg. but it is exposed to occasional injury by frost, and is not a profitable orchard tree north of Santa Barbara. Healthy trees in full bearing produce a thousand oranges or more in a season, and the value in the market is from two dollars to five dollars per hundred. The Los Angeles crop usually ripens from December to May, at a time when there are very few oranges from the Hawaiian or Society Islands in the market. As fifty trees stand on an acre, a fine income may be derived from a small orchard. The orange tree is not very easy to raise. Many die in transplanting, and in the nursery they are frequently ruined by the gophers, which are very fond of the roots. In the orchard, as well as in the nursery, they are exposed to the attacks of a bug, the orange *aphis*, which injures the trees so that they are barren, and some die. No method of killing the *aphis* has been discovered, but after a time the bug disappears without any known cause. The tree does not come into bearing until it is ten years old, and it will not thrive in the soil of Los Angeles without irrigation. There are eleven thousand orange trees in orchard in the State, and three hundred thousand in nursery, with a probability that many of the nursery plants will be set out in orchard within a year or two. Most of the large orchards are at Los Angeles.

The lemon tree is very similar in character to the orange. There are six thousand lemon trees in the State, including one thousand eight hundred in Los Angeles County, and four hundred in Santa Barbara.

The lime is also cultivated at Los Angeles, where four hundred trees are in bearing.

The fig tree thrives and bears abundantly in all the valleys near the level of the sea not visited by the ocean fogs.

Neat Cattle.

The neat cattle of Spanish stock are small and half wild in their nature. They yield very little milk, do not fatten well, and when fat do not yield juicy beef. They are, therefore, not suitable either for dairy purposes or stall-feeding. The dairy cows and most of the beef cattle in the northern part of the State are of American stock.

The importation of fine Devon, Durham and Ayrshire, stock, has not yet led to such pecuniary benefits as were hoped, and many intelligent farmers seem to be entirely satisfied to have American cattle, either for beef or for the dairy. The fine-blood cattle do not thrive on the wild grasses, and cultivated food is too expensive for general use. Whatever the reason may be, there is a general conviction among the owners of cattle ranches that the importation of pure-blood cattle from England does not pay. The Durham blood would, no doubt, thrive much better in Oregon and Washington, where the climate and vegetation resemble those of England. The method of keeping the cattle varies much in different parts of the State. In the densely-settled districts, the animals are tame and many of the cows are of fine blood and are kept for dairy purposes. Except that they have no shelter and are seldom fed by hand, they are kept nearly like cattle in the Eastern States. But in the San Joaquin Valley and on the Southern Coast, the herds run almost wild, and they are never touched, as a rule, except when they are branded or slaughtered. The law of California provides that the ownership of horses and cows shall be proved by the brand; and every spring and fall, in the southern cattle ranches, the herds are driven up, the calves and colts are lassoed, thrown down and branded on the hip with the iron of the owner. When the mark is well burned in, the victim is let loose, with no pleasant impression of human kindness. The herdsman or *vaquero* is not expected to recognize every one of a thousand head of cattle under his charge; but he knows the brand and by that proves property. When the animal is sold it is lassoed again and branded on the shoulder, and this mark is called the *venta* or sale. It is lassoed once more to be slaughtered, that is if killed on the ranch; if driven off to a town, it may be shot in a corral.

The dairy business is very profitable, when well managed, in California; but the number of those who manage it well is small. Good butter varies in price from twenty-five cents to one dollar per pound, the average being over fifty cents, and cheese of fine quality twenty cents. With such prices good dairymen can make fortunes in a few years. The main difficulty has been the lack of succulent food in the summer, fall and early winter; but the cultivation of root crops for the cows has been commenced and it will steadily increase. The general estimate is that a cow should produce a pound of butter per day for two-thirds of the year; and one man (for there are no dairymaids in the country) takes charge of twenty cows. The rancho of the Shafter Brothers, in Marin County, seventy-five thousand acres, is occupied entirely for dairy purposes, and is probably the largest dairy estate in the world. The methods of making butter and cheese are the same here as elsewhere.

There are five hundred thousand neat cattle in the State, and we make four million four hundred thousand pounds of cheese and five million five hundred thousand pounds of butter annually.

Horses.

Most of the horses of California are still of Mexican stock, and are admirably adapted to wild pasture and the saddle. They are healthy and hardy; they keep fat on scanty feed; they can travel long distances, even a hundred miles in a day, without injury; and after having been broken, they are docile and kind. For general service in the southern part of the State, they are decidedly superior to American or English horses. They are usually allowed to run wild until they are four years old, and they are then lassoed and broken. On some of the ranchos, the old custom of keeping the mares exclusively for breeding is still observed, and only the geldings are used for the saddle or harness. The Mexican horse is better than any other for the herdsman or vaquero; but is not swift enough for racing, and is not large enough for teaming. Near the middle of the State most of the horses are of American stock. The cross of the Clydesdale with the California stock makes a large horse, just suited for heavy work; but for the buggy and parade, the Morgan and thoroughbred are in demand. There are now several hundred thoroughbreds in the State, some of them fine enough to be classed among the best of their kind. There are also large numbers of American horses, of mixed blood, but of fine quality, excellent for general farm work. Most of the California horses are never fed with cultivated food or kept in stables, and many of the American horses, except when engaged in hard work, are treated in the same manner.

There are one hundred and ninety thousand horses and twenty-four thousand mules in the State.

Sheep.

In 1853, the breeding of sheep for their wool was first undertaken in California, by W. W. Hollister, who commenced in poverty and made a fortune at the business, and his success was followed by that of a number of others. Now, the breeding of sheep is an important part of the agricultural industry of the State. The production of wool in 1869 was eighteen million pounds; the average quality is about half merino, and the average net yield to the farmer about eighteen cents per pound. The quality of the wool is improving every year, as the blood of the herds is brought nearer the pure merino. The Spanish sheep furnished the original stock, but the Spanish blood is rapidly decreasing.

Our climate is peculiarly favorable to sheep. They need neither shelter nor cultivated food—at least most of them never receive either. The weight of the animal is ten per cent., that of the fleece twenty per cent., and the increase almost one hundred per cent. greater here than in the Eastern States. Besides, the sheep generally live longer. There is no disease among our herds, save the scab, and that is never fatal. If we add together the exemption from disease, the more rapid increase, the greater weight of fleece and mutton, the saving in sheds and

cultivated food, and the difference in cost of pasture lands, there is a large total in favor of the Californian wool-grower.

One shepherd can take charge of two thousand one hundred sheep, and the common wages are thirty-five dollars per month, with board, which costs ten dollars per month, making five hundred and forty dollars per year. About three thousand acres of land are required for pasturage, and the interest on the cost is three hundred dollars; making a total of eight hundred and forty dollars, or twenty-five cents per head, for the ordinary annual expenses. It is necessary to incur other expenses at lambing and shearing times, and these cannot be calculated so precisely, but they do not exceed ten cents per sheep, so that the expense per head is thirty-five cents or less. The yield of wool averages six and a half pounds per year, and the prices, if the quality is good, are from eighteen to twenty-five cents. A gentleman of much experience in the sheep business sold three thousand ewes for four dollars each, or twelve thousand dollars, and after the sale calculated the profit that the purchaser would make in two years, thus :

First year's wool.....	\$7,200
Second year's wool of three thousand lambs.....	3,500
Second year's wool of three thousand ewes.....	7,200
Market value of one thousand five hundred wethers.....	4,500
Market value of three thousand old ewes.....	12,000
Market value of one thousand five hundred young ewes.....	4,500
 Total	 \$38,900
 Deduct expenses of three thousand sheep at thirty-five cents for first year... \$1,050	
Six thousand sheep for second year.....	2,100
Cost of three thousand ewes.....	12,000
	15,150
 Net profit.....	 \$23,750

That may seem very extravagant, but there are men in the State who have been making money at that ratio in sheep for a long period, with the exception of the seasons of drought. One sheep-owner began the business in debt, in 1853, and now he owns forty thousand head of sheep, and seventy thousand or eighty thousand acres of land—all made with sheep.

The yearling wethers usually weigh fifty pounds; the two year-olds from sixty to sixty-five; the three-year olds from sixty-five to eighty, and the four-year olds from seventy-five to one hundred. The expenses of shearing are seven cents per head. A cross of the Spanish-Vermont merino with the French merino is preferred by the wool-growers generally. The best Spanish-Vermont bucks can be obtained for two hundred dollars or three hundred and fifty dollars each, and the ewes could probably be got for three hundred dollars, though there are none now for sale here. There is one herd of Southdowns in Los Angeles County, but they yield less wool, and it commands a smaller price than the merino. There are several herds of Cotswolds in the State, and they are growing in favor.

The exportation of wool began in 1855, with three hundred and sixty

thousand pounds; the next year it was six hundred thousand; the next one million one hundred thousand pounds; and it has since increased rapidly. The production for 1869 will probably be nearly eighteen million pounds.

The Angora Goat.

The Angora or Cashmere goat has been introduced in California, and it multiplies rapidly, and is very healthy, and as the wool is finer, more lustrous and longer than that of the sheep, and commands twice as much per pound in the market, and the fleece is about as heavy, hopes are entertained that it will contribute much to the wealth of the State. It is very similar in size, form and general appearance, to the common goat, save that the color is white, and the hair, instead of being coarse and short, is fine and from four to eight inches long. The weight of the fleece, when clean, varies from two to five pounds. The goat is healthier than the sheep, able to live on poorer food, more prolific, less stupid, more courageous and less likely to be injured by struggling when it must be approached or handled. These are qualities of much importance. The goat often has twins, and in favorable seasons bears twice a year, so that the increase is more rapid than that of the sheep, an expectation of one hundred and twenty per cent. increase annually on the number of ewes being not unreasonable if they are properly cared for.

The Silkworm.

The silkworm is a very delicate animal, and it is subject in Europe to many diseases, most of them directly traceable to climatic influences, from which this State is exempt. Climate is a matter of vast importance to the breeder of the silkworm, and nowhere is it so favorable as here. The worms are exceedingly healthy and prolific, the cocoons large, the fiber strong and fine, the mulberry luxuriant in growth and hardy. The colds of forty-five degrees, the heats of one hundred degrees, the thunder-storms and the summer rains, which frequently prove fatal in France and Italy, are almost unknown in our coast valleys. In Europe, even when there is no rain, there are many damp, cloudy days, which prevent the evaporation of the dew, and if there is any moisture on the leaves the worms sicken and die. The presence of the dew generally delays the feeding until late in the morning, whereas it would be far better if the feeding could be done early in the morning. It is customary in Europe to feed three or four times a day, with leaves plucked off separately; but in California they can be fed twice or even once with sprouts, each cut with a number of leaves on it. They increase at the rate of a hundred-fold at each generation. The female generally lays from two hundred to three hundred eggs, and it may be assumed that two hundred worms will survive and make cocoons; and as the females are about half, the total number may be multiplied by one hundred to represent the increase. In the fall of 1868, it was estimated that there were one million live cocoons in the State, and these produced butter flies which laid one hundred million eggs. The season of 1869, however, was disastrous for the silk-growers. Many of them were ignorant of the proper method of taking care of their eggs.

and put them into ice-boxes and the worms died. It is supposed that the crop of 1870 will do much better.

The Californian silk-growers have had so little experience that there is great diversity of opinion among them in regard to the expense of breeding the worms, the number that may be bred, and the area that will be required for feeding a given number. A great number of mulberry trees have been planted in nursery in this State, but very few in plantation or orchard, and for that reason the silk business is arrested, for without the mulberry plantation there can be no progress worthy of note. The trees should be planted not less than four feet, and perhaps six feet, apart; and when they are three or four years old, they will furnish leaves from an acre to feed half a million worms at a time, and if there are three generations in a year then each acre should feed a million and a half at that time. One active man ought to take charge of fifty thousand worms; Mr. Prevost thought he should attend to one hundred thousand. A plantation once made will last fifty or a hundred years, perhaps longer. The soil is never exhausted, nor does the silk deteriorate in quality with time. The plantation should have a moist, rich, sandy loam; and it requires occasional plowing and hoeing to keep the earth loose and clean.

There are forty-two thousand eggs in an ounce; which is now worth four dollars, with a probability of a steady demand at that price for years to come. The eggs of a million worms would be worth twenty-five thousand dollars, and the cocoons left by the worms would be worth six hundred dollars; or if the cocoons were not hatched, they would be worth two thousand six hundred dollars. In three thousand cocoons there is a pound of silk net, and the unhatched cocoons are worth eight dollars per pound of silk; the hatched cocoons, having been eaten through at one end, are worth two dollars a pound. A square foot of room must be given on a table for a hundred worms; and there may be tiers of tables; twenty thousand may be bred in a room twelve feet long and nine wide, with height enough for three tables.

Only the Japanese worms can be depended upon to produce three generations in a year.

California expends over two millions of dollars annually for imported silks, all of which and much more can in the course of a few years be raised and manufactured here with a profit. The United States imports an average of thirty million of dollars worth of silk annually on which the duty is over sixteen millions of dollars, a little more than fifty per cent. of its invoiced price. The stock has been taken for the establishment of a silk factory in San Francisco, the building erected, the machinery procured, and it will soon be in operation.

Expenses of Living and Traveling.

Flour and potatoes, kitchen vegetables generally and fine fruits, are cheaper in California than in New York. Sugar, tea, coffee and rice, are about the same price; butcher's meat is cheaper.

The price of boarding without lodging, at the best hotels in San Francisco, is twelve dollars per week; the ordinary charge at good hotels is two dollars and fifty cents and three dollars per day. The charge for board and lodging in San

Francisco for poor people, is from twenty to forty dollars per month, and for those who have means to live comfortably, from forty to seventy-five dollars. Houses well furnished, with six or eight rooms, bring from thirty to forty dollars per month rent on retired streets, and from forty to eighty dollars on fashionable streets. In the smaller towns the rents are from twenty to fifty per cent. less. The cost of living is greater in California than in any other country, but it is not so great relatively as the rates of wages and the general profits of business.

The following table shows the distances, time and fares, first and second class, and modes of conveyance from San Francisco to various points. The asterisk means currency; other prices gold:

LOCALITIES.	First Class Fare.....	Second Class Fare.....	Distance in Miles.....	Time.....	Manner of Conveyance.
New York	\$139 50*	\$65 00*	3,300	6 days	Railroad.
Chicago.....	118 00*	60 30*	2,290	5 days	Railroad.
Omaha.....	100 00*	50 00*	1,850	4 days	Railroad.
Ogden	50 00	40 00	742	2 days	Railroad.
Salt Lake	60 00	.....	770	2 days	Railroad.
White Pine.....	60 00	.....	714	2½ days	R.R. and Stage.
Virginia City.....	21 25	.....	295	27 h'rs	R.R. and Stage.
Sacramento	4 00	.....	82	4 h'rs	Vallejo Route.

STEAMSHIP LINES.—Inman, Liverpool to New York: steerage \$32, currency. Guion, Liverpool to New York: first class \$75, coin; steerage \$32, currency. White Star, Liverpool to New York: first class \$105, coin; steerage \$32, currency. American Line, Liverpool to New York: first class \$75, currency; \$31, currency.

RAILROAD.—New York to San Francisco: first class \$139.50, currency, emigrant \$60, currency.

In some cases, the prices will be reduced within a year, by competition, and the distance will be shortened by opening new routes.

Emigrants are carried in freight trains from New York to San Francisco for (\$60) sixty dollars, and from Omaha for (\$50) fifty dollars, currency.

Social Conditions.

The people of California are intelligent and liberal in their opinions. Schools are numerous and excellent. Benevolent institutions abound. In no part of the world are the Masonic, Odd Fellow, and kindred benevolent Orders, sup-

ported better. Few countries have more churches in proportion to the population. The laws are generally good, and the administration of justice is as strict as in any other American State. In San Francisco, life and property are quite as secure as in New York or Chicago.

Advice to Emigrants.

The following advice may be valuable to emigrants, especially to those going into a strange country, or not accustomed to travel:

1. Buy your tickets for passage on railroad or steamboats, only at the office, before starting. Many of the runners who offer tickets for sale in the streets are swindlers. If you intend to go in a steamer or ship, examine the vessel before getting your ticket, and engage a particular birth or room in a part of the vessel that is clean, well ventilated and just comfortably warm.

2. Never show your money nor let any stranger know that you have any. Thieves prefer to rob emigrants, who generally carry money with them, and cannot stop to prosecute them, and have no acquaintances to aid in the prosecution. Do not mention the fact that you are an emigrant to persons who have no business to know it.

3. Never carry any large sum of money with you. You can always buy drafts at banks, and if you are going to a strange place, you can give your photograph to the banker to forward to your destination, so that you can be identified without trouble when you want to draw your money.

4. Avoid those strangers who claim to be old acquaintances, and whom you do not recollect. A certain class of thieves claim the acquaintance of ignorant countrymen whom they want to rob.

5. Do not drink at the solicitation of strangers. The first point of the thief is to intoxicate or drug his victim.

6. Do not play cards for money with strangers. In many cases they confederate to rob emigrants.

7. Travel in company with old friends, if possible, and do not leave them. Thieves prefer to take their victims one at a time.

8. If you see anybody pick up a full pocket-book, and he offers it to you for small sum ; or if you see some men playing cards, and you are requested to bet on some point where it seems certain that you must win ; or if you see an auctioneer selling a fine gold watch for five dollars, don't let them catch you. Emigrants are systematically swindled by such tricks.

9. If, when you arrive in a strange place, you want information and advice, you can always get it by applying at the right place. First, apply at the office of the Immigration Society, if there is one. If you are a foreigner, you will probably find in the large cities a Consular office or a benevolent society of your countrymen, and you can apply there. Usually, there are attentive and polite men at the police office. Public officers generally in the United States are ready to assist and advise strangers.

10. Before starting from home, carefully read all the accessible books about the State or Territory to which you intend to go ; and when you arrive go to

some place where you can find old friends, if you have any. If you are poor commence work immediately, but do not be in a hurry to buy land unless with the approval of men whom you can trust. Take a month or two to get information about the country. Advice about the purchase of land is often given with corrupt motives. It is very seldom that anything is lost by a delay of a week or two in closing a bargain for land, though the seller will frequently say that somebody else is just going to take it. But do not delay to purchase, if you have the means, for more than two or three months; it is always cheaper for you to live on your own land.

11. Engage in some business with which you are familiar; and if its conditions are different from those to which you are accustomed, commence slowly, so as to learn at little expense. The agriculturist from Europe or the Atlantic States must learn anew many things in his business here.

12. Never fear failure at farming on your own land, if you live economically, work hard and select your place well.

13. It is better to be very poor for a few years on your own land than to be moderately poor as a tenant for others.

14. In selecting a home, look ahead. Care more for ultimate than for immediate success. Wherever there is a large district of fertile soil with a good climate, you can confidently settled down. It must fill up, and the land must rise in value. The fewer the people the better opportunity you have to select the most desirable spots, and when immigration comes in the greater will be the relative increase of population.

15. Before finally fixing upon a place to settle in California, examine what the average rainfall is; whether there are facilities for irrigation; what are the average temperatures of January, May and August; whether it is exposed to floods; whether fevers are common; whether it is in or near the line of any railroad likely to be built soon, and whether the soil is adapted to the vine, the mulberry, fruits and grain. *In the future*

Mining Excitements.

One of the common incidents of business in California is the occurrence of mining excitements, under the influence of which thousands of men leave their homes and regular occupations in the hope of making a fortune in a few months at new diggings, of which marvelous reports are published. These reports are usually exaggerated, because there are many persons (such as owners of stages and steamers, hotel-keepers, brokers, owners of claims, etc.) who derive profit from the excitement. Experience has shown that these persons, or others working in their interest, do not hesitate to devise and circulate deliberate falsehoods, with intent to deceive and defraud the ignorant and credulous. Experience also shows that false statements are often published by writers who know nothing about mines, and are misled either by designing men, or by their own oversanguine disposition. Even in those cases in which the mines are marvelously rich, there is little chance for the new-comer not familiar with mining. The discoverers usually take up all the good claims before they let the public know anything of the discovery. If there is anything that they fail to find, the old

miners, of whom the country is full, stand the best chance. But if the newcomer gets a good mine, he will find that it requires much money to open a mine, and much experience to open one properly. If he is poor, he must get the assistance of capitalists, who will take most of the profit. The day has gone by when men could make their fortunes with a pick and shovel in a few months of mining. As a proprietor of mines, the poor man, bred to other business, has little chance of success; and as a laborer, he can do better elsewhere. Wages are high, but the expenses are high too, the comforts of life are scarce, the work is often unhealthy and dangerous, and the employment uncertain. Nine out of ten of the old miners who go off on these mining excitements come out losers, even when the mines are rich, as in the case of White Pine; and when the diggings are poor, as they were at Kern River, all the time and money spent are entirely lost.

Business Prudence.

The poor man coming to California should understand that it is difficult to get a start here, but that after a good start is once obtained, life is easy. If he obtains employment, he should endeavor to become very skillful in his business, for an excellent workman gets better wages here and is more sure of employment than in any other country. He should also exert himself to gain and deserve the confidence of his employer, for such exertion will pay well. He should stick to one place and one business, as nearly as possible. If he has a business in which he can invest his savings, or if he needs a home, that is the proper place for it; if not, he should take or send it to a Savings Bank. Neighbors or friends will want to borrow it, and will offer security and high interest; but the safer plan is to prefer the bank. It requires much experience to know how to lend money without risk of loss. This State is full of men who know scores of methods for making fortunes in a few months, and they will lay out plans that may well delude the inexperienced; but the facts that they live from hand to mouth, have not a foot of ground, and are in debt to everybody that will trust them, furnish pretty good proof that he who lends to them will never see his money again. The man who is making a start should be content with slow and sure profits. There is so much wild speculation in California, that strangers often imagine it is necessary for them to take part in it, and they lose their money before they suspect that they are in peril, and perhaps at the very time when they fancy that they are on the road to fortune. There is no country in which close attention to the strictest rules of business prudence pays better than in California.

The rate of wages is so high that a man with a good trade and economical habits can accumulate a little fortune in ten or fifteen years by putting his money in the savings bank, which is next to a home and a man's own business, the best place for money. The savings banks generally pay ten per cent. per annum, and the interest compounds semi-annually, so as to double the principal in eight years. But the savings of every month can always be added to the principal in the bank, and this is an important item in the course of years. California is full of speculators, but the majority do not make ten per cent. interest on their

investments, and many lose both principal and interest. Among the multitude there are some cases of brilliant success; but the stranger should look for his guide to the general and not the exceptional result. Speculation is a luxury in which rich men can afford to indulge; but poor men should be shy of it. There are now thousands of poor men who would have been independently wealthy if they had known enough when they had money to keep out of speculation.

The following rules are applicable in California as well as elsewhere:

Stick to your craft and master it thoroughly. Buy nothing at a distance. Invest no money in business which you do not understand or which you cannot oversee. Be industrious; work as hard to save a dollar as to earn one; live within your income, no matter how little it is, and lay by something every month as long as you are poor. Do not be afraid to appear poor. Avoid positions in which you must spend money in show and give your time without compensation, unless you can well afford it. Do not let others get in your debt, and do not get in debt to others beyond your means to pay. Self-respect and health are worth more than riches. Do not believe that youth is the only season for enjoyment. Take care of yourself; and a healthy and reputable middle age, with its experience, its ripened mind, its accumulated knowledge, friendship and money, will give you more pleasure than youth would have been capable of securing or appreciating.

Conclusion.

California is a large State, rich in many valuable metals, fertile in soil, peculiarly blessed in climate, inhabited by an intelligent, active and enterprising, people, and strange in many of the conditions of its business; and it affords far more information, desirable for immigrants, than can be compressed into a pamphlet like this. They who desire to learn more of the State are referred to the following books:

"The Resources of California," by John S. Hittell, published by A. Roman & Co., of San Francisco and New York, is a duodecimo volume of five hundred pages. It treats at considerable length, of the topography, climate, botany, zoology, agriculture, mining and scenery, of the State. Price, one dollar and fifty cents.

"The Natural Wealth of California," edited by T. F. Cronise, published by H. H. Bancroft & Co., of San Francisco, is a large octavo volume of eight hundred pages, treating the same topics, and also giving full descriptions of the several counties, and a sketch of the early history of the State. Price, five dollars.

"The Report upon the Mineral Resources of the Pacific Slope, for 1866," by J. Ross Browne, is a federal document of three hundred and sixty octavo pages, of which two hundred are devoted to the mines and mining laws of California.

"The Report upon the Mineral Resources of the Pacific Slope, for 1867," by J. Ross Browne, is a federal document of six hundred and seventy-five pages, of which three hundred are occupied with a description of the mines of California.

All these books can be found in the principal libraries and bookstores of the United States.

CALIFORNIA IMMIGRANT UNION,

[ORGANIZED OCTOBER, 1869]
FOR THE PURPOSE OF
ENCOURAGING IMMIGRATION
TO THE
STATE OF CALIFORNIA.

PRINCIPAL OFFICE:
534 CALIFORNIA STREET, SAN FRANCISCO.

IMMIGRANTS and others desiring reliable information in reference to PUBLIC OR PRIVATE LANDS IN CALIFORNIA and the mode of acquiring them, can address their communications to the MANAGER or GENERAL AGENT, or apply at the CENTRAL OFFICE, 534 CALIFORNIA STREET, SAN FRANCISCO.

Information can be obtained of the best quality of Farming Lands, in the valleys and foothills, at prices varying from

\$1.50, \$2, \$2.50, \$3 and \$5 per Acre and upwards—

On liberal terms—one, two, three, four and five years' credit.

The "UNION" takes particular care to inform applicants in regard to Government lands and lands belonging to railroad companies.

The "UNION" is prepared to make the most desirable arrangements for the settlement of colonies from the States east of the Rocky Mountains and from European countries, and to obtain cheap transportation for them direct to California.

Good Farming Lands, in tracts of 5,000 to 50,000 acres, can be obtained at \$1.50 to \$2.50 per acre, and on liberal terms.

New-comers visiting the different counties of California, in search of farming or other lands for settlement, will be provided with letters to the Agents of the "UNION" or other intelligent residents who are disposed to favor settlers, from whom such precise information as they may need—concerning the quality, values and titles, to property in the locality—may be obtained.

Pamphlets containing reliable information in regard to California sent to any part of the United States or Europe, when ordered.

Parties in California having lands suitable for Immigrants, and wishing them offered, can send description and terms to this office.

Information of all kinds, beneficial to Immigrants, respectfully solicited, and will be carefully given to new comers upon their arrival.

President ----- WM. T. COLEMAN.
General Agent ----- W. H. MARTIN.
CENTRAL OFFICE - - - - - 534 California Street, San Francisco.

Total Area of California,	-	-	-	-	{ Sq. Miles, 188,981 Acres, 120,947,840
Surveyed,	-	-	-	-	" 30,500,000
Spanish and Mexican Grants,	-	-	-	-	" 6,030,814
Granted for School and Educational purposes,	-	-	-	-	" 6,765,404
" Internal Improvements, Public Buildings, etc.,	"				506,400

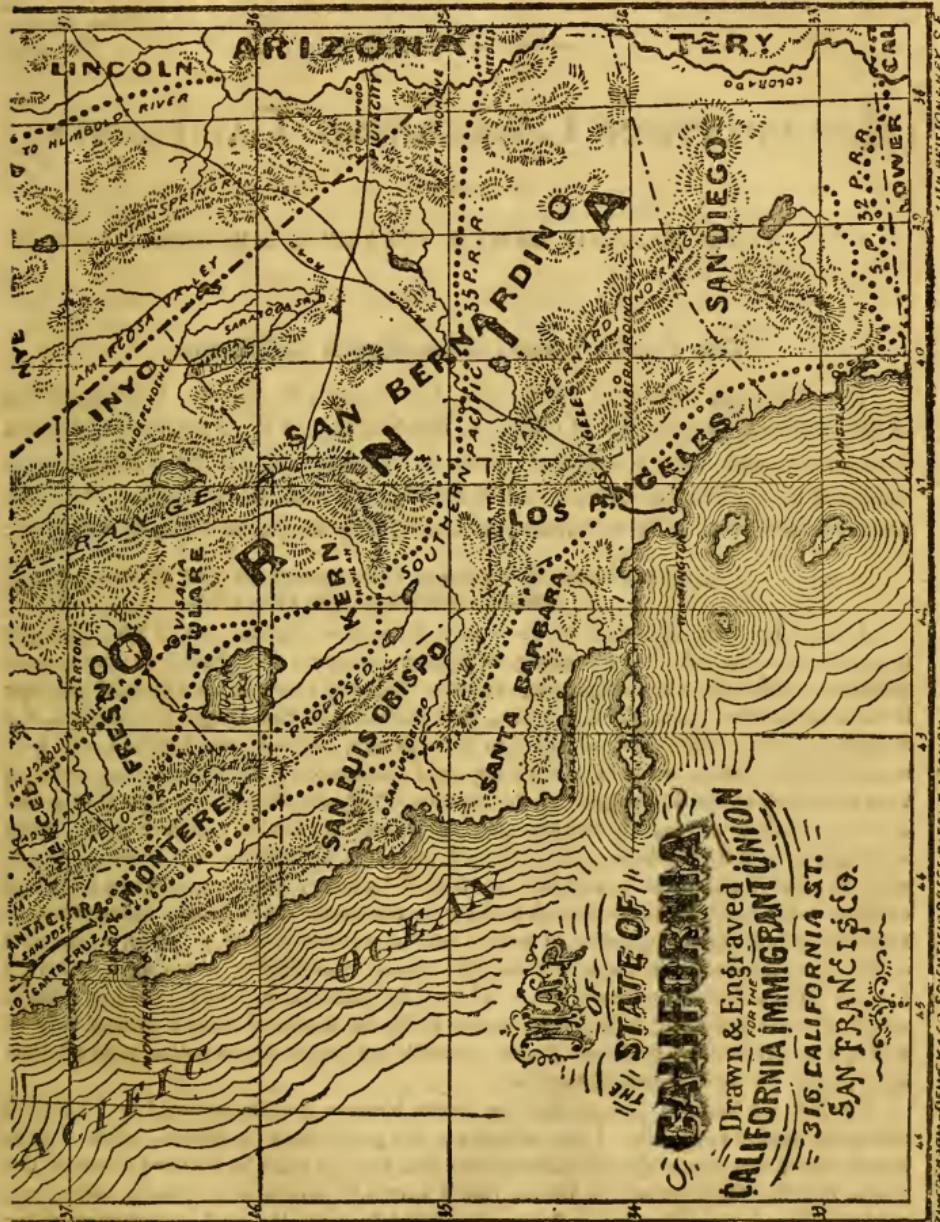


CENTRAL OFFICE of the

No. 534 CALIFORNIA

President, W. T. Coleman,

Claimed by Railroads,	-	-	-	-	-	Acres,	10,424,000
Disposed of by Government,	-	-	-	-	-	"	18,500,000
Still open to Settlement,	-	-	-	-	-	"	86,000,000
Available for Tillage,	-	-	-	-	-	"	88,000,000
Of which is Government Land,	-	-	-	-	-	"	44,000,000
Land Inclosed,	-	-	-	-	-	"	4,500,000



California Immigrant Union, ST., SAN FRANCISCO,

General Agent, Wm. H. Martin.

APPENDIX.

INFORMATION CONCERNING CALIFORNIA,

FROM

OFFICIAL AND OTHER RELIABLE SOURCES.

The Public Lands of Southern California.

THE following copy of a letter from Hon. Joseph S. Wilson, Commissioner of the National General Land Office at Washington, to the American Consul at Rotterdam, replying to inquiries made by residents of Holland intending to emigrate to California, contains information that will be of interest to every person who wishes to be well informed concerning the public lands of this State:

UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR,
General Land Office, May 13th, 1869.

ALBERT RHODES, *United States Consulate, Rotterdam, Holland*—DEAR SIR: In reply to your letter of the 7th ult., requesting information in regard to public lands in Southern California, especially in the neighborhood of Los Angeles, I have to state that the valuable lands in the southern portion of that region, in the counties of San Diego, Los Angeles, San Bernardino, Kern, Santa Barbara and San Luis Obispo, are to a considerable extent held under Mexican grants, many of which have been confirmed by the United States since we have succeeded to the sovereignty of the country. The counties of San Luis Obispo and Kern may form an exception to this statement, as Government land of excellent quality exists in each; but so much has been recently entered under the pre-emption and homestead laws, and located with college scrip, and still continues to be taken, in consequence of a numerous emigration to Southern California within the past two years, that it would be hazardous to undertake to specify the quantity of public land at present subject to entry, as the next returns from the local officers may show the amount considerably diminished. There is however an abundance of unoccupied land of the best quality in each of the counties named, which, whether belonging to the Government or in the hands of private owners, may be readily obtained at very moderate prices, generally varying from one dollar to five dollars and upwards per acre, according to value.

Lands in the hands of persons claiming under Mexican grants confirmed by the United States, are perfect as to title. Lands claimed under grants not so confirmed, seldom rate at a high figure; and should the title subsequently fail, and the lands be declared a part of the public domain, the laws of the United States extend to parties in possession under conveyances from former grantees, a pre-emption right to enter the land so occupied at the minimum price of one dollar and twenty-five cents per acre, so that in either event the settler will obtain the land at a very low price. Indeed, at the present day no apprehension need be felt about the title of lands in California, as most of the old Mexican grants, valid or invalid, have passed through the ordeal of judicial investigation, and have either been con-

firmed or the lands claimed declared part of the public domain; and even if an occasional claim should be met with not acted upon, the Acts of Congress make such liberal provisions in favor of *bona fide* settlers that no great injury can result in the event of such claim proving invalid.

An emigrant from Europe, entirely unacquainted with the land system of the United States, or the nature of titles in this country, and the mode of recording them, might be liable to make a bad bargain, unless he fully informed himself. But there are abundant opportunities of ascertaining the condition of the title of every tract of land, and a person of ordinary prudence need not to go amiss.

Government lands in California may be taken under the pre-emption or homestead laws, the entries being effected in the manner pointed out in the accompanying circular from this office, dated March 10th, 1869. In the southern part of the State these lands are mostly located to the eastward from the Coast Mountains; but there are, nevertheless, in the western portion of each of the above-named counties, small quantities of public land not yet occupied, which may be entered at the District Land Office at San Francisco, excepting lands in Kern County, which must be entered at Visalia, in Tulare County. The localities of the different places mentioned may be readily understood by inspecting the accompanying map of that State; an examination of which will also show the localities of private grants confirmed at the date of the map, the names of which, with corresponding numerals, are placed in the margin.

It will be observed that the good lands of Southern California are found on the Pacific, in the valleys and on the foot-hills of the Coast Mountains, extending inland from twenty-five miles to seventy-five miles, embracing an area susceptible of cultivation and admirably adapted to horticulture, equal in extent to the State of Massachusetts.

The climate of these valleys, some little distance from the coast, is not surpassed in any portion of the world; the intense heat experienced in the arid plains further to the east being modified here by an altitude of several thousand feet above the level of the ocean. Numerous streams of water flow through the valleys—many of them permanent—furnishing the means of irrigating large bodies of land. The grape vine flourishes here luxuriantly; more than six million being cultivated in Los Angeles County alone, yielding one and a half million gallons of wine, and more than one hundred thousand gallons of brandy, besides large quantities of choice grapes for the San Francisco market.

The grape attains vigorous growth in almost every variety of soil, is remarkably free from disease, and requires no irrigation. It flourishes as well in the foothills and on the sides of the mountains as in the valleys, and produces a stock strong enough to dispense with the necessity of stakes, thus greatly reducing the amount of labor required in a vineyard. A vine is now growing in Santa Barbara County twelve inches in diameter four feet from the ground. At six feet from the ground the stem is divided, the branches extending in every direction, covering an area of ten thousand square feet, and producing annually twelve thousand pounds of grapes, in bunches from fifteen to eighteen inches in length, averaging from six to seven pounds each. This vine is of the old Mission grape, and was planted forty-three years ago.

But the soil and climate of these valleys are equally well adapted to the growth of the orange, lemon, lime, citron, fig, walnut, olive, banana, almond, filbert and currant; and wheat, barley, corn, potatoes, cotton, tobacco and sugar-cane thrive well. In an orange grove of two thousand trees, near Los Angeles, the annual crop averages one thousand five hundred oranges to each tree, some of the trees producing as many as four thousand each. The sides and summits of the mountains contain an abundance of pine, cedar, hemlock, maple and oak; and deposits of gold, silver, copper, tin, marble, alabaster, asphaltum, petroleum, sulphur, salt and coal, are numerous.

* * * * *

Of the four million or five million acres in Southern California adapted to the vine and the mulberry tree, and a great variety of semi-tropical fruits, not much over one hundred thousand acres are thus cultivated—probably not that quantity; and although that region is

capable of accommodating and comfortably supporting a population of one million five hundred thousand, its present population falls short of forty thousand.

Hundreds of thousands of acres of the finest lands, blest with a climate equal to that of the fairest portions of Italy, are held in extensive tracts under Mexican grants, and are either entirely unoccupied or devoted to grazing; the proprietors, however, manifesting a willingness to subdivide and sell their claims as rapidly as the increase of settlers creates a demand for the same.

As an illustration of what may be accomplished by an enterprising colony of settlers, the village of Anaheim, in Los Angeles County, may be referred to. In the summer of 1857 a company of Germans acquainted with grape culture, bought one thousand two hundred and sixty-five acres of land in the valley of the Santa Ana River, at two dollars per acre, dividing it into fifty rectangular lots, of twenty acres each, with streets between them, and subdividing the residue into sixty town lots—one for each of the proprietors, and ten for public purposes. The lots were all fenced with willow, sycamore and poplar, and about ten acres of each planted with vines. At present there are over one million vines growing in this village—most of which are in bearing—already producing annually over five hundred thousand gallons of wine and some ten thousand gallons of brandy. Of the various kinds of fruit trees there are more than ten thousand. Every one of the fifty lots contains a comfortable homestead, and the village has a population of about four hundred, with a good public school, several stores and a post-office in the town. Each of these lots is worth at the present time fully ten thousand dollars, and is continually increasing in value. The history of Anaheim demonstrates the advantage of settlements by colonies. Had each of the original fifty settlers of the village located by himself, cut off from the encouraging sympathy and mutual counsel of congenial neighbors, it is doubtful whether success would have crowned the efforts of one-fourth of their number; but adopting the colony plan, they have in twelve years advanced to a situation not only of comfort, but of comparative wealth.

There are many opportunities, not only in the County of Los Angeles, but in each of the others named above, and, in fact, in nearly every county in California, to repeat the experiment of the Anaheim settlement, under circumstances even more favorable than existed in that case.

Since 1857 the character of California as one of the best wine-producing countries in the world has been fully established; many foreign varieties of the grape have been tested, and much that twelve years ago rested upon uncertainties has been established by repeated experiments; in addition to which the great continental railway from the Atlantic to the Pacific has been completed, opening a market for the products of the California vineyards.

All these advantages, that did not exist when Anaheim was founded, will render the trials of similar colonies much less severe.

Very respectfully, your obedient servant,

JOS. S. WILSON, Commissioner.

Prices of Land in California.

The Surveyor-General of California, in his report for 1869 (page 12), says:

The emigrant (of limited means) will find, on his arrival here, that the price of land around the Bay of San Francisco is high, entirely out of his reach, but the lands in the valleys not bordering the bay are not unreasonably high. In San Joaquin County, good agricultural lands can be bought for from seven dollars to thirty dollars per acre; in Stanislaus County at from five dollars to twenty-five dollars per acre; in Merced, at from five dollars to twenty dollars per acre; in Fresno, from two and one-half dollars to ten dollars per acre; in Tulare and Kern, about the same as in Fresno. These counties are all in the San Joaquin Valley, and for productions they have no superior anywhere. In Los Angeles and San Diego, lands are reasonably low. In Mendocino, Humboldt, Del Norte and Trinity counties, the improved lands are high, but there are thousands of acres of unoccupied land that the settler can get for one dollar and a quarter per acre, with fine timber, water and grass.

The "CALIFORNIA IMMIGRANT UNION" is prepared to enable immigrants to make purchases of fine farming and grazing lands in the counties above named, at the prices mentioned, the rates varying according to the location and the amount of improvement already made. Public lands, concerning which all necessary information will be given at its office, are obtainable at Government rates, two dollars and twenty-five cents per acre within the railroad reserves, and one dollar and fifty cents per acre elsewhere. Where locations are made in advance of the surveys no payments are necessary until the land is surveyed, and meantime the settler is abundantly protected in his rights under both National and State laws, and taxes are only levied upon the improvements as long as the title to the land remains in the Government.

State Lands.

In addition to the lands offered by the General Government, the Report of the Surveyor-General of California, made to the Legislature November 1st, 1869, shows that there are in this State in the neighborhood of one million acres of school lands granted by Congress to the State yet undisposed of. These comprise the sixteenth and thirty-sixth sections in each township, and such other lands as may be selected in lieu of those sections where they are covered by Spanish grants, etc. They are mostly located in the mining and timbered regions of the State, and have not been sold because the General Government has not yet extended its surveys over them, and population is sparse or wanting altogether in their vicinity. The surveys are, however, being gradually extended over these districts. These school lands are sold by the State at the price of one dollar and twenty-five cents per acre, of which twenty per cent. only need be paid down, while the balance remains on credit, with interest at ten per cent. per annum, until full payment is made, when the patents are issued. The swamp and overflowed lands along the Sacramento and San Joaquin rivers, and their tributaries in the valleys, are sold at one dollar per acre, of which twenty per cent. only is payable within fifty days of the approval of the survey—the balance remaining at legal interest—the whole of the proceeds being applicable to their reclamation for the benefit of the purchaser. When reclaimed they become among the most valuable farm lands in the State, the soil being a rich alluvium, and the moisture preventing any failure of the crops. Sherman Island, at the confluence of the San Joaquin and Sacramento rivers, has been thus reclaimed by the purchasers, and proves admirably adapted to the raising of vegetables and fruits of all kinds, which find ready sale in the market of San Francisco, and the land sells at thirty dollars per acre. The success of this enterprise is encouraging similar undertakings.

What Sort of a Country California Is.

The following is an extract from the Annual Address, delivered by Hon. J. B. Crockett, Judge of the Supreme Court of California, before the State Agricultural Society, September 21st, 1868:

The true secret of our rapid growth in all that constitutes the real greatness and gran-

deur of a State, lies chiefly in the fact that nature has furnished us with a genial climate of unparalleled salubrity; with a soil of unexampled fertility, diversified with beautiful plains, enchanting valleys, undulating hills and rugged mountains—the whole being washed on one side by the Pacific Ocean, with its healthful breezes, and intersected by navigable streams from the mountains to the sea. When we remember that these beautiful plains and valleys not only rival the delta of the Nile in their wonderful fertility, but far excel it in the variety of their products and in the salubrity of the climate, and that these rugged mountains are not only covered with gigantic forests of valuable timber, but contain within their rocky caverns hidden treasures which have long since put to an open shame the story of Aladdin and his lamp, it requires no profound political economist to disclose by subtle reasoning the real secret of our unexampled progress as a people. Where Nature has been so prodigal in her gifts, tempting the husbandman with such generous returns for his labor, stimulating the enterprise of the miner with such enormous stores of hidden wealth, and infusing new energy into the merchant by spreading out before him the Pacific Ocean, with its sunny islands and its distant shores courting our growing commerce, the wonder is not that we have accomplished so much but that we have not accomplished more. The truth is, that we are so absorbed in the daily pursuits of business, in the fierce strife of politics, in the eager rivalry for wealth, and in the frivolities of fashion, that we but seldom pause to contemplate the boundless resources of our favored State, and to return thanks to God for the goodly heritage He has given us. Of all people who breathe the free air of heaven, we have the best reason not only to be satisfied with our condition, but to be devoutly thankful for the innumerable blessings which we enjoy. I say this in no spirit of exaggeration, but as a fact which is capable of complete demonstration. Let us see if it is so.

In the first place, good health is essential to the happiness of every human being. The poor invalid, pining on his bed of anguish, is blind to the beauties of nature, deaf to the "concord of sweet sounds," indifferent to all the appliances of luxury and art, and consumed with the longing, eager desire for renewed health. In no other country can there be found such assurance of good health as in California. With a genial, agreeable climate, subject to but few variations in temperature, with an atmosphere of wonderful purity, kept fresh and sweet by the trade winds from the Pacific, and with no summer showers to produce a putrid mass of decaying vegetable matter in the summer months, it is not a matter of surprise that robust health is the general rule, and serious sickness, except from constitutional or abnormal causes, is the rare exception. All strangers observe the beautifully-developed forms, the rounded limbs, swelling bust and rosy cheeks, of California children; and with a climate so favorable to sound health and muscular development, if we shall properly train the moral and mental faculties, the men and women hereafter to grow up in California will furnish the finest types of the Anglo-Saxon race. The time is not distant when invalids from all parts of the world will flock to California to avoid the extreme cold of Northern winters, the sultry heat of Southern summers, and to breathe the health-giving breezes of our mountains and valleys.

Let it be remembered that we as yet have a population of only about five hundred thousand, whilst we have about sixty-five millions of acres suitable for agricultural purposes, less than two millions of which are in actual cultivation. When it is borne in mind that, owing to the amazing fertility of the soil and the variety of its products, a family can be maintained in comfort upon an area incredibly small, as compared with other countries, it requires no prophetic vision to foresee that, when our unoccupied millions of acres shall be reduced to cultivation, and improved methods of culture shall be introduced, we can not only support a population of many millions, but California must, of necessity, become one of the richest agricultural districts on the habitable globe.

It is, therefore, to the farmer, the honest tiller of the soil, that we must chiefly look for the highest development of our material wealth. And here, let me inquire, what other country wears so captivating an aspect to the thrifty, enterprising, industrious farmer? His lands will produce from twenty-five to thirty bushels of grain per acre, with moderate care; and the next year he will get a good volunteer crop of twelve or fifteen bushels to the acre, with-

out sowing. His grain is free from weevil, but seldom damaged by rust or smut, can be harvested without fear of rain, and then thrashed and piled up in the field until sent to market. The winters are so mild that but little fuel is required, and, for the same reason, stock demand but little feeding. When we add that all kinds of stock thrive and grow beyond precedent, comparatively free from disease, and that the most delicious fruits and the finest vegetables abound on every side, we complete the picture of this farmer's elysium. But why need I repeat facts which you all know better than I? Why weary you with dry details, which are as familiar to you all as the days of the week? Suffice it to say, that whilst these millions of acres remain untilled, let no ungrateful wretch complain that he can find no work for his hands to do in California. Instead of loafing about the cities earning a precarious living, often by questionable methods, and daily complaining of a lack of employment, let him go into the country and rent, if he cannot buy, a small piece of land. If he will then go to work upon it with courage and industry, abstain from vices, deport himself honestly, and thank God that his lot has been cast in so goodly a land, he will soon have cause of gratitude to me for this advice. If unmarried, he will soon be worthy to become the husband of some honest girl, which, if he be a sensible man, he will consider it his bounden duty to do.

The Sacramento Valley.

The following description of the valley of the Sacramento River is taken from an address delivered by Hon. George Barstow, at Chico, Butte County, before the Upper Sacramento Agricultural Society, September 13th, 1869. A glance at the map will show that he indulged in no mere figures of speech, but is abundantly justified in all he said:

THE SACRAMENTO VALLEY.

Let us survey for a moment the ground where we stand. We are assembled in the midst of the Upper Sacramento Valley, at a spot which the genius of American enterprise dedicated to civilization only nine years ago. Yonder in the valley comes the Sacramento River, pouring down from gold-bearing mountains and carrying in its current the melted snows of the Sierra Nevada. Far through the trees it winds and flows. It is the child of the Sierras, and reflects their grandeur in its course. Still and deep it rolls on, bearing many a bark and goodly steamer upon its bosom and constituting the charm of this landscape. On its left bank stands the Capital of the State, whose people built a barrier against its current and conquered the power of its floods. To me there are few objects in nature more truly sublime than a valley spread out by an Omnipotent hand, from foot-hills to foot-hills, on such a vast scale as this. When dry and parched, no desert is more dreary. When uninhabited, no solitude is more profound and imposing. But when the abodes of man dots its surface, when the plow has furrowed it, when greenness clothes it as with a garment, or when its fields are loaded with harvest stores, then it is one of the loveliest objects that gladdens the eye of man, and its riches are but a type of the inexhaustible riches of the Creator. But the great valley yet waits for the railroad and the canal. Wherever such a system of internal improvements as I have sketched shall be carried out, its teeming population will be counted by millions. San Francisco will be greater than ancient Thebes was. Sacramento will be greater than San Francisco now is, and Vallejo will be the second city west of the Rocky Mountains. Look again at the valley as it lies spread out around us, forty miles in width from side to side. There are principalities in Germany where civil government is maintained, and all the pomp of a court kept up, on a much smaller extent of territory than the Sacramento Valley. The inhabitants of New England can, with difficulty, conceive of a valley forty miles wide. The dwellers by the Mohawk and the Shenandoah can have just as little comprehension of it. The valleys of the Rhine and the Rhone are insignificant in point of territory when compared with it. And we have just as little idea of the beautiful cultivation of their valleys as they have of the prodigious extent of ours. Can we not learn a lesson each from the other? Our lesson is that the most magnificent natural advantages are nothing unless we improve them.

Their lesson is, not to remain clinging to the scanty acres of Europe, but to take up their march for the New World.

San Joaquin and Tulare Valleys.

The following description of San Joaquin and Tulare valleys is an extract from an address by Dr. E. S. Holden, an old and distinguished resident of the district, delivered at Stockton before the San Joaquin Stock and Agricultural Implement Association, September, 1869, to be found in the Report of the State Agricultural Society for 1868-9, at page 341 :

The great valleys, San Joaquin and Tulare, extending from Stockton to Tejon Pass, three hundred miles, by an average width of fifty miles, embracing twelve counties, contain over eighteen million three hundred and sixty-eight thousand acres, a territory larger than all the New England States, save New Hampshire. These counties contain land susceptible of cultivation, six million of acres; swamp and tide lands, five hundred thousand acres. This amount of land good for cultivation does not embrace land in the hundreds of little valleys in the mountains and on the foot-hills, now well known to be perfectly adapted to fruit culture, particularly the grape in most of its varieties. These valleys have been little known or thought of outside of their resident population until recently. Since eighteen hundred and sixty-eight more land has been entered in the Stockton Land Office (over two hundred thousand acres) than in all previous years. The lands in the valleys bordering on the Stanislaus, Tuolumne, Merced, Mariposa, Owens, Fresno and Chowchilla rivers, are extensively rich in soil, being a sandy loam, alluvium, and enriched for ages by the accumulation of decomposed vegetable matter and mineral washings from the mountains and hillsides; also, similar lands bordering on King's, White, Kern and Tulare rivers, and the score of smaller streams which, like the larger streams or rivers, meander through the land from the base of the Sierra Nevada mountains, and empty their waters into the San Joaquin River and Tulare Lake, at a distance of from twenty-five to forty miles from the mountains. Hundreds of thousands of acres in the mountains and hillsides afford abundance of rich grasses the entire year for grazing. This section of the State has always been preferred by the Spanish and American settlers, the climate being more genial for raising the immense herds of stock than the northern section. The old Spanish breed of cattle and horses, that have continually grazed by the hundreds of thousands in these valleys since eighteen hundred and fifty-five, have been reduced in numbers, and stock of all kinds has wonderfully increased in quality by the introduction of pure American breeds, and recently by pure blooded or thoroughbred horses, Devon and Durham cattle, Spanish and French Merino sheep, Berkshire, Suffolk and Essex hogs.

One instance in regard to what this valley (San Joaquin) has produced this season, of wheat, is worth a moment's mention, from the fact that three years ago this section was a wide waste, not supposed to be worth the expense and time to cultivate. This section, called the Paradise Country, lies between the Stanislaus and Tuolumne rivers, embracing a territory of two hundred and thirty thousand three hundred acres, in one field of wheat. Fifteen bushels to the acre is the estimated average per acre, or equal to about three million four hundred and fifty-six thousand bushels. About an equal amount of wheat was raised this season in the neighborhood of this truly Paradise. A nice little freight for a railroad.

In the Alpine regions, dense forests cover millions of acres, producing valuable woods for mechanical purposes, and varieties of pines for lumber; also minerals of all kinds, inexhaustible quarries of pure marble, quartz, lime, slate and freestone.

This State contains one hundred and fifty-four thousand one hundred and sixteen square miles, or ninety-eight million six hundred and thirty-four thousand two hundred and forty acres of land. Of this, sixty-five millions of acres are adapted to agriculture and fifteen millions to grazing, the balance being mountain and swamp, or tule land. Under judicious management, experience has demonstrated that almost all productions of the soil that are raised elsewhere can be produced in California. This fact is by this time undoubtedly well

known to all observing and reading persons, yet it is well for Californians to keep this fact before the people, *a la Sherman*, who made an immense fortune by keeping his lozenges before the babies.

There are several magnificent features in these valleys (the San Joaquin and Tulare) probably unsurpassed in the world. The unparalleled grandeur of the scenery; the soil and climate; the facilities for irrigating the whole valley land at a small expense, comparatively; the many large rivers and scores of intervening streams that all spring from the mountains and meander through the land, and empty their waters into the San Joaquin and Tulare Lake, have a fall from the base of the Sierra Nevadas to the river and lake of about eight feet to the mile, thus giving sufficient force to spread their waters over the plains, by a system of canals and ditches.

The picturesque scenery is on a scale grand beyond description. Throughout all the Alpine region, hundreds of lofty peaks piled one above the other, like stepping-stones to other regions, varying in height from four hundred to fifteen thousand feet above the level of the sea, are truly sublime and majestic, surpassing that of Switzerland, which for ages has been famed for possessing the largest body of elevated land and the largest number of mountain peaks known, and the greatest number of square miles eight thousand feet above tide water. While Switzerland has only four peaks above thirteen thousand feet, and but one hundred and fifty square miles above eight thousand feet, the Sierra Nevada Mountains have one hundred peaks above ten thousand feet, and three hundred square miles above eight thousand feet. There are several peaks, according to Professor Brewer's estimate, above twelve thousand feet. Mount Shasta, which towers in solitary grandeur seven thousand feet above everything in its vicinity, and shows three States, is no longer the highest peak, being but fourteen thousand four hundred and forty feet. In Kern County, opposite Tulare Lake, is a peak supposed by Professor Brewer to be the highest in the Sierra Nevada Mountains. Mr. King, of the Brewer surveying party, reached an elevation of fourteen thousand seven hundred and thirty feet, as high as he was able to get, and from three hundred to four hundred feet was supposed to be above him. This peak not only dethrones Mount Shasta, but also the highest Alpine region of the Alps.

The Sierra Nevada Mountains, which flank on the east the length of California, seven hundred miles, overlooking these splendid valleys, is one of the most romantic features of the State, snow-capped in the winter, and in the summer and fall wearing a somber blue, which gives them an indescribable grandeur and leads one's thoughts to an infinite power—the Creator of the heavens and the earth.

Room for Immigration in California.

The Surveyor-General of the State of California, in his last report to the Legislature, November 1st, 1869 (page 12), says, when speaking of Immigration:

A few remarks on this important subject would not be out of place in this report. The valley of the San Joaquin, stretching three hundred miles southward, with an average width of thirty miles, is capable of sustaining a population of one hundred thousand.* The Sacramento Valley, lying in a northerly direction from Sacramento, will sustain as many or more than the San Joaquin. The western slope of the Sierra Nevada can more than quadruple its present population.

The rolling hills belonging to the two coast ranges can sustain a pastoral population of many thousands. The valleys of Napa, San Jose, Suisun and Sonoma, can comfortably support ten times their present population. The counties of Mendocino, Humboldt, Del Norte, Trinity, Siskiyou and Shasta, with their inexhaustible forests of timber, rich soil and pastur-

* Since the foregoing was in type we are informed by the Surveyor-General that this was a typographical error occurring in the office of the State printer, and that for "one hundred thousand" we should read "one million."

age, will give employment to tens of thousands of industrious people. The counties of Los Angeles, San Diego, San Bernardino, Santa Barbara and San Luis Obispo, with their semi-tropical climate and excellent soil, will furnish homes for as many inhabitants as the whole of New England now contains.

The smallness of these estimates will surprise any one who compares them with the figures concerning the density of population in any of the countries of Europe or the older Eastern States. They were probably intended only to apply to such occupation and cultivation as now prevails in the portions of California already settled.

That a better idea of the size of California and its capacity for additional population may be obtained by those who have not heretofore examined the subject, we give the following figures, taken from the "American Year Book and National Register" for 1869, Vol. I, showing the areas and population of some of the Eastern States:

	<i>Square Miles.</i>	<i>Population.</i>
New York.....	47,000	3,880,735
Pennsylvania.....	46,000	2,906,115
Maine.....	35,000	628,279
Maryland.....	11,124	687,049
Vermont.....	10,212	315,098
New Hampshire.....	9,280	326,073
Massachusetts.....	7,800	1,267,031
New Jersey.....	7,576	672,035
Connecticut.....	4,674	460,147
Delaware.....	2,120	112,216
Rhode Island.....	1,306	184,965
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	182,092	11,439,743
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The areas of all these States, which are contiguous, added together do not equal that of California by over six thousand eight hundred square miles, a territory exceeding that of Connecticut and Delaware, so that, if the populations of those two States (five hundred and seventy-two thousand three hundred and sixty-three) were again added to that which the above States contain, on an American basis, California is capable of supporting a population of over twelve millions, if not more densely settled than the States mentioned.

If, however, we compare its area and population with those of European countries, the possible future of California, and the number of people it is "capable of sustaining," calculated on such a basis, is surprising. The following figures are as given by the same authority:

	<i>Square Miles.</i>	<i>Population.</i>
France.....	209,428	38,192,094
Spain.....	195,607	16,302,625
California.....	188,981	600,000
Sweden.....	170,634	4,160,677
North German Confederation.	160,207	29,910,377
Great Britain.....	121,115	29,321,288
Italy.....	109,837	24,368,787

If we take the smaller States of Europe, not much larger than some of our counties, and together not equaling our State in size, the figures will further surprise the reader. They are taken from the same authority:

	<i>Square Miles.</i>	<i>Population.</i>
Portugal	37,977	4,351,519
Bavaria	29,373	4,824,421
Greece	19,353	1,348,522
Switzerland	15,722	2,510,494
Denmark	14,734	1,608,095
Belgium	11,373	4,984,451
Baden	5,912	1,434,970
Saxony	5,779	2,423,401

Thus the San Joaquin Valley alone, estimated as above by the Surveyor-General as three hundred miles long, with an average width of thirty miles, which will not include the foot hills, has an area of nine thousand square miles, or nearly that of New Hampshire, with its population of over three hundred and twenty-six thousand ; is one-third larger than Massachusetts, with its population of one million two hundred and sixty-seven thousand, and nearly twice as large as Connecticut, with a population of four hundred and sixty thousand.

Together, the San Joaquin and Sacramento valleys are larger than Belgium and Saxony, with their more than seven millions of population, and, with proper cultivation, equal in fertility. We do not wish, however, to see our State thus crowded, but merely refer to these figures for comparison, and to show the large amount of vacant land we possess.

The Kind of Immigrants California Wants.

The following extract from the Report of the State Board of Agriculture for 1869, to the State Legislature at its last session (page 9), correctly states what kind of immigrants California desires to receive. All such can rest assured that no other country offers equal rewards for enterprising and industrious men :

The class of immigration we most need in California is such as will come to make permanent homes for themselves and families. We want, above all others, persons skilled in a great variety of agricultural pursuits. We want persons skilled in the culture and manufacture of silk, in all its departments. We want vine growers and wine makers. We want beet raisers and sugar manufacturers. We want tea culturists and fruit preservers. In short, we want people skilled in the production of all the necessities and luxuries of life, for we have a State possessed of all the requisite conditions for their successful cultivation. We want such as will bring with them sufficient means, energy and capacity, to enter upon business for themselves ; such as will buy land and become citizens and practical and prosperous farmers, or build shops and factories, and follow some mechanical or manufacturing occupation. In order to induce this class of persons to leave their homes and business in the Atlantic States and come here to reside, we must promise them opportunities for making better homes and better business here. Are we prepared in good faith to make such promises ? And, having made them, are we prepared in like good faith to fulfill them ? So far as natural advantages, such as climate, soil and location, are concerned, we are prepared to answer both these questions in the affirmative. We may also say there are millions of acres of arable land, much of it as good as any now cultivated in the State, lying idle and unoccupied, and that by the completion of railroads already projected, and many of them now being built, much of this

land will in a short time be brought within easy distances of good markets for products that may be raised upon it.

On this subject the Surveyor-General of California, in his report to the Legislature, dated November 1st, 1869, also says (page 13):

The State should use every exertion to promote immigration of the industrious classes from Europe. We want workers; we have non-producers enough here already; we have doctors, lawyers clerks and politicians, in abundance; we now want farmers, mechanics, artisans and wine growers; all of this class can find profitable employment here, and in a very short time can make comfortable homes for themselves and their families.

We have already quoted the views of the Governor of the State upon this subject.

When Farmers should Come to California.

Persons desiring to come to California to engage in agriculture, should arrive here as early as September; and not later than October, as then the first rains occur, and plowing commences. An earlier arrival will give them time to look about them and make a judicious selection of their lands.

Diversified Agriculture.

Intelligent agriculturists, coming here from other States and countries where farming is carried on upon scientific principles, and where rotation of crops and careful manuring of the soil are universally practiced and stipulated for in all leases, that the land may be kept at its highest productive condition, will be surprised to learn that in the majority of instances neither of those essentials of good farming have yet been practiced to any great extent in this State. Instead of that, very many of our farmers are simply grain raisers, devoting their whole land, time and capital, year after year, to the raising of a single crop, and buying even their vegetables from store keepers and vegetable peddlers, who bring them from other districts. Thus our railroads and steamboats are often engaged in bringing grain to the city and carrying vegetables back to the grain-raising districts! The report of our State Board of Agriculture for 1869 (page 24), says:

One of the most remarkable features connected with California agriculture, is the almost entire absence of vegetable gardens in the best agricultural districts. Farmers, whose tables, above all others, should and could be well supplied the year round with the greatest abundance of delicious vegetables, fresh each day from their own gardens, are notoriously the poorest supplied with these luxuries of any other class of people in the State; and, strange to say, what they do have, generally come from the vegetable dealers in the towns and cities, and are stale and uninviting. Vegetable peddlers buy their supplies in the towns and cities, and make their regular trips among the grain raisers in the country to sell them. This anomalous state of affairs is brought about by two causes—first, that the soil of our grain land is not so well adapted to the production of vegetables as grain, and next, to an indisposition on the part of the farmers themselves to cultivate in the garden. Time to do so is certainly not wanting, for garden work could and should be done here in the winter and early spring, when the other work of the farm is slack. Half an acre of ground, properly prepared and judiciously cultivated in a variety of garden produce, would yield more real profit to the farmer than five times that amount sown to grain. It would employ his idle moments, stimulate him to useful experiments, and be the means of bringing up his boys to habits of industry, besides furnishing his table with a constant supply of health-producing luxuries, to which,

under the present system of management, it is a stranger. The man who cultivates a garden well, insensibly becomes a good and successful farmer, and he who neglects to cultivate any garden at all, just as insensibly, but surely, becomes a slovenly and unsuccessful farmer.

It is very evident, therefore; that we want a more intelligent and industrious class of farmers than many of our present citizens, and that all such will be able to do far better than the most prosperous of those who thus violate every rule of agricultural economy. Upon the necessity for a more diversified agriculture to the proper development of the resources of California, and which is itself a sufficient hint to thoroughly-educated farmers of the prosperity that is here offered them, we quote again from the report above-mentioned (page 11):

Probably no equal portion of the earth's surface is so well calculated, from its great variety of soils and climate, to sustain a diversified, and hence, profitable, agriculture, as California. All the products of the temperate and many of those of the tropical climates, flourish here with equal luxuriance. Nature seems to have marked out this country as the special paradise of the agriculturists; and yet the great curse of our agriculture and the State is the sameness of production—the over production of a few agricultural products. It is a stigma upon the intelligence and enterprise of our farmers that very many of the common necessities of life, and those, too, for the production of which our State is most peculiarly adapted, and which would yield the greatest profit to the producer, are constantly imported. The very money received by our farmers for their grain, sold at a low figure in consequence of over production, is, much of it, exported from the State to pay for these same necessities consumed by themselves. It is a shameful and deplorable fact, that many of the naturally best grain-producing portions of our State have been cropped every year for from ten to fifteen years in succession, with grain, and in many cases with one single unvaried crop—wheat. The result has proved just what the farmers have time and again been told it would bring about—exhaustion of the soil. In many localities, where once the land yielded from forty to sixty bushels of wheat per acre, it now yields scarcely enough to pay for the labor of sowing and harvesting. What is still worse, many of these improvident grain farmers are disposing of their exhausted lands and moving to other sections to find a virgin soil, which they, in turn, will in like manner exhaust.

Farms of this character, in good localities, possessing many advantages over lands more remote from the centers of business, and often with considerable improvements, such as buildings, fences, etc., upon them, can be bought at rates that will make purchases highly profitable to thorough farmers, as with proper cultivation they will soon return to their original productive condition. The report quoted adds (pages 12, 13):

What we want, above all things, to give us universal prosperity and constant and remunerative employment for all classes, is a diversified agriculture; an agriculture so varied in its products and so constant in its operations that it will require about an equal amount of labor every month in the year; an agriculture that will produce not only all that a dense population would require for home consumption, but one that would furnish for export, products a thousand times more valuable than would be all the wheat our State could produce, if every acre of land within its borders, adapted to its cultivation, were to yield a hundred bushels a year. That nature designed California for an agriculture as diversified in its character as are the soils and climates of her thousands of valleys and innumerable mountain and hill-sides, and as valuable as the world has ever known, cannot be doubted.

Grape Culture in California.

The following is an extract from a report and memorial presented to the Senate of California by the Committee on Culture of the Grape, at its session in

March, 1870. General Wilson, of Los Angeles, one of the oldest settlers, and the oldest and one of the most extensive grape raisers and wine makers in the State, was chairman of the committee:

Perhaps no other country on the globe, and certainly no other portion of the American continent, is so well adapted, in all respects, to the successful and profitable cultivation of grapes, as the State of California, which, indeed, seems as it were, to be the natural home of the grape, where it grows readily, from cuttings, upon the most arid hill-sides, and without irrigation.

The culture of the grape gives more employment to labor than any other branch of farming, and its development will tend greatly to the rapid peopling of our State with immigrants from among the honest, industrious and moral, natives of the wine-growing districts of Europe.

To the immigrant who comes to California without means, with the expectation of a dependence upon farm labor for support, the districts devoted solely to the culture of the cereals offer small inducements; for, while the demand for labor is comparatively great and the pay liberal for a short period during the rush of gathering and harvesting the crop, it is succeeded by a long interval of inaction, when there is little or no need of hired labor, and the employee is turned adrift, perhaps to suffer from want before another job offers; besides, in our country, where the use of labor-saving machinery in agriculture is so universal, the demand for manual labor is comparatively small, and is decreasing every year. This is not the case in vine culture; the careful planting and annual pruning of the vines, and the gathering of the ripened fruit, can only be done by the employment of human hands.

The growing of the grape is not in conflict with any other branch of agricultural industry, but can be made auxiliary to nearly all other kinds of farm labor, as for example: if you raise grain, your seeding is over before the labor of pruning the vine commences, and at the time of grain harvest there is little or no work required in the vineyard; and if the cultivation of the mulberry and feeding the silkworm should prove a success in California, its prosecution will present no conflict with the vintage work. And in a country blessed with so genial a climate and fruitful a soil as California, where all these several branches of agricultural industry—grain growing, stock raising, vine culture, and rearing the silkworm—can successfully be blended together and practiced in the same district, skilled and willing labor can find an abundant field, with continuous employment, at remunerative wages the year round.

The following is also an extract from a report by the same committee, made earlier in the same session, in February, 1870:

Our vintners have no motive for adulteration. The crop is always good; there is no lack of legitimate material; grapes are abundant every year. It is not with us as with European vine growers. There, one good, full crop, safely harvested, in five years, is a fair average for the last half century; while there has been no single year in which the grape crop has been a failure in California, since the introduction of viniculture here in seventeen hundred and forty—now more than a century and a quarter. Still further: while the European crop is always subject to rains, at the season of gathering, producing mold and rot in the berries, which transmit their offensive qualities through every stage of the products, California vine growers enjoy an entire immunity from this evil, and hence can regularly and certainly produce a purer wine or brandy than is possible in the other case.

Summing up on this point, an experienced and intelligent Hungarian vine grower, after extensive investigations in our State, says: "Of all the vinegrowing countries in Europe, not one possesses the advantages of California; and I am satisfied that even if the separate advantages of these countries could be combined in one, it would still be surpassed by California when her resources shall be fully developed. Nowhere in France, the Netherlands, Holland, Rhenish Prussia, Bavaria, Nassau, Baden, Switzerland, Spain, Italy or any other country,

can be found wines more noble and generous than this young State on the Pacific is capable of producing. Nor has she ever been anywhere equaled in the amount of her vintage per acre, or the annual certainty of her crop.

Raisins.

The State Agricultural Society, in their report for 1868 (pages 15 and 16), also say:

We have frequently called the attention of our people to the cultivation of this fruit, and pointed out the peculiar advantages our climate offers, not only for the growing of the grape but curing of the raisin. Experiments in many portions of the State, on a small scale, have proved the correctness of our views, and have also, in our opinion, shown that the industry could be so managed as to be very profitable. The importation of raisins into our State is about fifty thousand boxes a year, at a cost of from one hundred and seventy-five thousand dollars to two hundred thousand dollars. The importations of the United States average about one million five hundred thousand dollars in value. The process of making raisins is as simple as drying apples or any other fruit. When the grapes are thoroughly ripe they are picked and spread on tables, or on the ground, cleaned and prepared for that purpose. Two or three weeks exposure to the sun, and turning once or twice, perfects the process, and the raisins are ready for boxing and market. The black Corinth Grape flourishes in our climate as well as any other variety, and the Zante Currant has been made from it to some extent and of very superior quality. This is a most useful and delicious fruit, and its general introduction and cultivation would be a great acquisition to the fruit product of the State.

The Foothills and Grape Growing.

The Grass Valley "Union," of May 10th, 1870, says:

When a wine maker of Europe imagines a country exactly adapted to the wine growing business, the picture in his mind's eye is a faithful representation of the foothills of California. He, in his dreams, sees hillsides of red and rocky soil, in a metamorphic or volcanic region, where there are seams in the rocks, through which the vine roots can pierce to find what moisture is needed for the grape, and in which moisture so derived and pumped up are dissolved the elements so necessary to the flavor of wine, as well as to the growth of the grape. The very lands desired, the foothills furnish in abundance, and, moreover, the lands here have proved in every instance where trial has been made, the European wine maker's dream the truth, when he described this country. The foothills do grow good grapes and do make the best of wines, and the foothills are to be the first wine-making country of the world, in excellence.

The European wine-maker describes also the climate of our foothills, when he pictures to himself the country he would wish for his business. He wants a dry climate, for he knows that blight and mildew affect the vine in climates subject to rains; summer showers wash from the skin of the grape the sugar which exudes, and which is essential to wine making, being a basis for alcohol; grapes ripen slowly and imperfectly in climates liable to rains, and the vine needs no such showers for its growth. The experienced wine maker wants no surface water on his vines, because it causes his grapes to grow too watery and insipid. In California, we have the desired climate. No rains in much of the growing season of the vine, and none in the ripening time of the grape. Blight and mildew are unknown among us, so entirely unknown that we can spare sulphur, the remedy for such vine diseases, to be shipped to the rainy climates of the East. In short, the foothills of California make a perfect country for grape growing and wine making.

With such adaptability to the production of an article for which there is an universal demand, and an article which such few countries can pretend to produce, there is no doubt of the ultimate greatness of the foothills of California. It will soon be demonstrated that money can be made by manufacturing wine at twenty cents a gallon, and at that small price

there is more gold now ready to be taken out of the ground through the vine, than has been hitherto extracted by the pan, rocker, long-tom, sluices, arastras, and stamps of the miners. Then, too, our vines will make and keep a population, the keeping part gold has not done. But the vineyard business is in the future—let us hope the near future.

In this part of the region of which we speak, lands held by the Central Pacific Railroad are sold at two dollars and fifty cents per acre, and on five years' time. In the respect of payment, the railroad is more liberal than the Government. United States lands are two dollars and fifty cents per acre, in greenbacks, with cash terms.

The Sugar Beet.

Among the new products to the cultivation of which the soil and climate of California are peculiarly adapted, is that of beet sugar. The report of the State Agricultural Society for 1868-9 (page 14), says:

California imports annually about thirty million pounds of sugar and about five hundred thousand gallons of molasses. The sugar costs our people about four million five hundred thousand dollars, in gold; the molasses, two hundred and fifty-thousand dollars, in all four million seven hundred and fifty thousand dollars. This amount of gold is shipped from the State annually to pay for these two articles. On the sugar we pay an import duty of an average of four cents per pound, equal to one million two hundred thousand dollars; on the molasses we pay a duty of about five cents per gallon, equal to twenty-five thousand dollars; making our annual duty on sugar and molasses, one million seven hundred and fifty thousand dollars.

The foregoing statement is sufficient to show how great are the inducements to farmers to settle in this State, and make the extensive culture of the sugar beet a leading branch of their business. No special tax is here levied upon the production, as is the case in Europe. It is a business in which competition is never injurious or to be feared, since the demand for the manufactured article is unlimited, and the consumers at our doors. Capitalists have offered to erect the mills and apparatus for sugar manufacture wherever farmers will stipulate to devote a sufficient breadth of land to the beet culture to justify the necessary investment. There is room for an unlimited number of co-operative enterprises of this character. Lands of the character required for this culture, and possessing all the requisite facilities, can be obtained along our navigable rivers and railroad routes at very moderate prices.

The sugar beet has been successfully raised in many parts of California. Careful experiments have demonstrated that the soil is admirably adapted to its culture, the yield remarkably heavy, and that the beets contain a much larger percentage of sugar than those raised in France, Belgium and other countries in which the business of beet-sugar making is carried on extensively and with large profits. The length of our summers also permits the beets to mature more perfectly than where their growth is interrupted by frosts. They may be allowed to remain in the ground for an indefinite time without injury or necessity for protection of any kind, as there is no frost to be feared. They may be stored without danger of rotting. The dry weather and warmth of the Sun is also sufficient to render the drying of the beet, when sliced, a simple and easy matter, without the use of fuel, so that the sugar may be much more cheaply concentrated than is possible elsewhere. These advantages have commenced to

attract the attention of enterprising men, and two companies have been formed to carry on the business. One of these is located at Sacramento, the other in vicinity of Alvarado, in Alameda County. The latter company are already building an extensive mill, of sufficient capacity to work into sugar fifty tons of beets per day. Messrs. Otto and Klind, formerly engaged in this business in Germany, and subsequently in Minnesota, and a Mr. Bonesteel, are the managers. The company at Sacramento are also making their arrangements for engaging largely in the business. Mr. Wadsworth, who studied the business in Europe, is their manager.

Flax and Hemp

Another branch of agriculture to which the State of California is peculiarly adapted, and which in other States and foreign countries affords profitable employment to thousands of farmers and operatives and large amounts of capital in the manufacture of the raw product, is the culture of flax and hemp. On this subject the last report above quoted (page 18) says:

We would call the attention of our farmers to the cultivation of flax and hemp. Both these plants are natives of our State, and experiments in their cultivation show that they may both be very successfully cultivated in the rich alluvial soils of all our river bottoms and valleys. Formerly, there being no factories here for working up the flax seed, or for converting the fibers of these plants into cloth, there was no market and no inducement for engaging in this branch of agriculture. Now, there is a market for both seed and straw. The oil factory in San Francisco is using all the flax seed produced in this State, and importing largely to keep the factory running. The cultivation of flax for the seed alone would prove much more remunerative than wheat or barley on our river bottoms. It may be sown after the water of the river has subsided, and mature well. An acre of ground will produce, on an average, two thousand pounds of seed, which is worth four cents a pound, giving eighty dollars as the product per acre for seed alone. The yield of straw will be from two to three tons per acre. This, in the Atlantic States, is worth from twenty dollars to thirty dollars per ton. The immense demand for bags and bagging material on this coast, estimated at not less than one million dollars in value annually, has induced some of our woolen factories and the cotton factory to turn their attention to the manufacture of burlaps and other bagging material from flax and hemp straw, and the latter is now offering twenty dollars per ton for the straw of the farmer. At these prices, then, land may be made to yield at the rate of over one hundred dollars per acre. This branch of agriculture has been sadly neglected.

Castor Oil Bean.

On the culture of this plant, the report above mentioned (page 19) says:

The soil and climate of our State is peculiarly adapted to the growth of the castor bean. The plant here, in good localities, becomes a perennial tree, bearing its annual crop like our fruit trees, and the average yield per acre, by the actual experiment of the few who have engaged in the business, is from one thousand five hundred to two thousand pounds per annum. The oil factory at San Francisco pays for the beans, four cents per pound; making the crop average from sixty dollars to eighty dollars per acre. The small bean only should be planted. The tree of the large bean grows too large for gathering the crop, and is not so good a bearer.

Hop Culture.

Hops have yielded well wherever planted in California. They have been extensively tested and raised successfully in the counties of Alameda, Amador,

Butte, Colusa, El Dorado, Los Angeles, Mendocino, Mono, Monterey, Napa, Placer, Sacramento, San Joaquin, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sonoma, Sutter, Tuolumne, Yolo and Yuba. The largest yields shown by the reports of the County Assessors to the Surveyor-General, in 1869, were as follows: Sacramento, two hundred and seventy-seven acres, three hundred and ten thousand eight hundred and eighty pounds; Mendocino, one hundred acres, one hundred and twenty thousand pounds; Sonoma, fifty and three-fourths acres, twenty-six thousand nine hundred and fifty pounds; Yolo, thirty-four acres, thirty-four thousand pounds; Yuba, twenty-nine acres, twenty-four thousand five hundred pounds. The total yield reported for the year 1868, was stated in said report at six hundred and thirty-two thousand and sixty-eight pounds, the product of seven hundred and sixty-five and three-fourth acres, much of which was experimental. The absence of rain during the season, when the vines are in blossom, preserves the entire strength of the flower. The Assessor of Monterey County, in his annual report for 1869, says, concerning his county:

The culture of hops has lately been undertaken. Fifty-five acres have yielded, in eighteen hundred and sixty-eight, twelve thousand five hundred and eighty pounds. A tract of land of thirty-five acres, at the foot of the hills on the east side of the Salinas Plain, and in the neighborhood of the village of Natividad, has yielded eight thousand pounds. The yield of eighteen hundred and sixty-nine promises to be handsome. Seventy-two acres have been planted with hops.

California hops have taken the highest premiums when exhibited abroad, and, when grown upon suitable soil, are far superior to those used in other countries.

Chile Clover or Alfalfa.

Concerning this valuable grass or forage plant, the same report (page 25) says:

This clover seems to be especially adapted to the peculiarities and wants of the country. It has been thoroughly tested for years, both on the rich alluvial soils of the river borders and on the higher lands of the plains, and has proved satisfactorily successful in all localities. Its roots strike deep into the soil, in the form of what we generally term tap roots. On the borders of some of our rivers they have been known to penetrate seventeen feet below the surface. On the uplands, deeply plowed and well tilled, they will find constant moisture sufficient to produce rapid growth the year round. For hay, this clover, when cut in proper condition, when in bloom, is of good quality for stock of all kinds, and especially for milch cows.

It will produce three and four crops a year—say in April, May, June and July—averaging from a ton to a ton and a half at each cutting. After the last crop it continues to grow rapidly, and furnishes a very large amount of feed for stock, as pasture, the balance of the year. We have the testimony of good dairymen, to the effect that cows taken from the native grasses, and pastured on fields of Chile Clover, will increase in the product of milk and butter, or cheese, from sixty to seventy per cent. Also, that one acre of land, well seeded with it, will produce more pasture in a year than ten acres of the same quality of land will in the native grasses.

Rice Culture.

Concerning this product the State Agricultural Society, in their report above quoted (page 16) say:

It is one of the strangest things in the history of California agriculture, that the cultivation of this grain has never been undertaken. We have thousands of acres of land, on the lower Sacramento and San Joaquin rivers, eminently suited in every respect to the successful and profitable culture of rice. Probably the best explanation for the neglect of this product is found in the general and chronic indisposition of the American—and particularly the Californian—agriculturists to step out of the old grooves and routines of cultivation learned by the examples of their fathers.

We import and consume from forty million to fifty million pounds of rice annually, in our State, at a cost of about two million five hundred thousand dollars. We have a large population among us well calculated for this industry, and many of them are already skilled in its management. By directing their labor into this channel it might be made to contribute very materially to the wealth of the State, while, at the same time, the success of the enterprise would tend to stimulate the reclamation and utilization of the hundreds of thousands of acres of tule lands now comparatively worthless.

There is also a variety of rice grown upon uplands, which could doubtless be cultivated with profit in many portions of the State.

A long list of other agricultural products, fruits, etc., could be mentioned, but it is sufficient to say that whatever can be grown in any part of the Eastern States or Europe, and many of the products of the semi-tropical regions, can be successfully, and with labor cheaper than at present—as it will be when our agriculture is more varied, employment regular and engagements made by the year instead of by the day—profitably grown in California, since our climate is so diversified, and our soil so generous to the husbandman. Upon this point it is only necessary to refer to any standard work on California.

Picture of a California Home.

A correspondent of the "Woman's Pacific Coast Journal," writing from Yuba County, gives the following picture of one of the many similar homes that are to be seen in that vicinity. The scene is in the foothills, is not overdrawn, and there are thousands of acres of unoccupied Government lands in the State which can be obtained and easily brought to the state of perfection that characterizes the pretty home which the correspondent graphically describes:

Fifty-five miles from the bay window where we write, the snow-covered heads of the Sierra Nevada mountains stand out clear and sharp against the eastern sky. Here in the foothills, fuchsias, geraniums and roses, are bright with half-open buds and blossoms. In the closet are crisp, hard quinces of last year's crop; along the borders the quince trees are thickly covered with blossoms. The purest crystal waters come leaping from the hearts of the hills, and all the meadows laugh with the gayest-colored flowers. Humming-birds and swallows, calla-lilies and verbenas, orange trees, lime trees, lemon trees, are all mixed up in sweet confusion. Yonder are olive trees in perpetual green, and a little further, English walnuts and grape-vines, with leaf-buds fast swelling. The apple trees do not believe summer time has come, and patiently bide their time and season, but peaches and apricots and nectarines are tossing to the breeze sweetest perfumes. Fig trees generously give three crops a year, and in these early March days have pushed out all along their naked arms hundreds of figs as

large as an infant's thumb. Pomegranates, almonds and Newtown pippins, grow in the same border as peaceably as if they had been life-long friends. Oleanders and sweet cassia trees are from ten to twenty feet high, out of doors all winter. Down the garden walk I see blackberries, raspberries, currants and gooseberries. There, also, are half-grown strawberries. In the vegetable gardens the beet, carrot and cabbage, do not seem to know when summer leaves off, and so they keep on growing all the year, until surprised out of all propriety by being rudely pulled and thrust into market.

Down the hill slope there is one acre of alfalfa and red clover six inches high which gives three crops, and furnishes an average of eight tons a year of sweet and tender hay. Around these boulder rocks are grape vines that every year rejoice in ten-pound clusters of perfect fruit. A little further along, against the fence, is a seven-year old vine, three feet high, with three or four short arms from its head, that annually bears one hundred pounds of grapes. There is a patch of raisin grapes, three years old, the old wood, three inches in diameter, headed three feet from the ground, with triangular frames around them to support the fruit. After the children and chickens and wasps had picked at them last year, they yielded ten pounds each of perfectly luscious dried raisins. The quality and quantity of pears, plums and cherries, is to us so marvelous we dare not risk our reputation for truthfulness by repeating the items as they were told to us. Around the east porch is a solitary rose-bush, trained in festoons, reaching over seventy feet—at that point cut back, because it was encroaching upon the rights of its neighbor, who was ambitious to share the honor of crowning this sweetest of mountain homes with buds and blossoms. This, dear reader, is a picture of the thousands of homes that it is possible, with a little perseverance and wisely-directed industry, to build up in this sunny clime. The owners of this paradise are working people. The wife is equally at home in the kitchen, nursery or chicken yard, at the piano or in the parlor. The husband is the son of a Puritan sire, and a pioneer Californian, who, in addition to his daily work, has used the early morning hours to transform this rocky hill-side into a fruitful flower-crowned paradise.

Surveys in the Foothills.

Until recently, very few public surveys had been made in the foothills of the Sierra Nevada. Miners, stockraisers and agriculturists, alike entered upon and occupied them and made such improvements as they chose, with the full permission of the government, but without acquiring titles to the land they used. The lands were not surveyed, because it was not the wish of the miners who formed the great bulk of the population, that the government should sell the lands, and the government acceded to their wish. Within a few years past the policy of the government has been changed in this respect, and now the surveys are being extended over the foothills and the mining regions. As fast as this is accomplished, the miners are able to obtain absolute titles for their quartz and placer-mining claims, and farmers, stockraisers, vineyard planters and lumbermen, to purchase the land they require.

The Hon. Sherman Day, United States Surveyor-General for California, in his report to the Land Department for the year ending June 30th, 1869, says:

Of the mineral lands, only two townships were subdivided last year, both in Nevada County. * * * * I am now letting a series of contracts extending along the mining foothills from Mariposa County to Shasta, for the purpose of enabling the agriculturists of those regions to secure permanent titles to their homes, and to enable the deputy surveyors to locate the surveys of mining claims with reference to the subdivisions of the public lands. * * * * Contracts were let early in the spring for the subdivision of nineteen townships or fractional townships, in Tehama and Shasta counties, be-

tween the fifth and seventh parallels north. These lands will fall within the Oregon and California railroad belt. Three additional townships have been subdivided within the limits of the Central Pacific Railroad grant, and only a few more now remain to be surveyed within those limits.

A contract has been taken to subdivide the foothills lying south of the Merced River, and west and south of the Mariposa Rancho. Another has been taken for the subdivision of lands between the Stanislaus and Calaveras rivers, comprising the copper-mining region. Continuing still further northwest, two other contracts have been let for subdividing the mineral lands of Amador County, east of Ione Valley, and reaching up into the southern portion of El Dorado County, comprising many rich gold mines, and some of copper.

These surveys will cover some of the best vineyard land in the State, and many small valleys and rolling hills, capable of cultivation with wheat or barley, covered with scattered groves of oak or nut pine, and well adapted for dairy farms, gardens, orchards, and the raising of cattle, sheep and hogs. * * * * I doubt not that in a few years the wheat and barley mines, the potato mines, the grape mines, the peach, plum and pear mines, the olive-oil mines, the butter and cheese mines and the silk mines, will be found to be paying better dividends than the mines of gold and copper of the same region. Nevertheless, they can both go hand in hand to help each other if sound titles attract labor and capital.

Two contracts have been let for townshiping and subdividing among the valleys of Plumas County, comprising also some timber lands. Two contracts have been let among the table lands of San Luis Obispo County, which are principally adapted to grazing purposes. Two fractional townships have also been let for subdivision south of San Diego, adjoining the boundary line and the ocean.

From inquiry at his office in San Francisco, we learn that a large part of the work in the contracts mentioned, has been completed, so that settlers can now enter these lands which are not strictly mineral, for agricultural purposes, under the homestead and pre-emption laws. Besides these, a large number of other contracts for surveys, in the same districts, have been let during the past twelve months, the work upon which is progressing and being rapidly completed.

Colonies

Whenever farmers and others intending to come to settle in California are acquainted with each other, if possible, it is advisable that they shall move together and settle in the same locality. The advantages of this course are numerous and important. By moving at the same time, reduced rates of fares and freights can often be obtained from railroad, steamship and transportation companies; lands can be purchased in large tracts at wholesale prices; teams and expensive farming implements can be purchased jointly, and, by settling together, much expensive fencing can often be avoided; a neighborhood grows up at once; a certain and rapid enhancement in the value of the land purchased is secured; schools, churches, post and express offices, stores, good roads and, eventually, railroads and all the other conveniences of life enjoyed in older communities are created far earlier than is possible where one settler is located at a time and the growth of population is slow and precarious. By writing to the "CALIFORNIA IMMIGRANT UNION," California Street, San Francisco, or its agents at New York, Baltimore, Chicago or Omaha, transportation can always be secured at the lowest possible rates.

COST OF HOUSES, STOCK, TREES, ETC.

For the information and guidance of those who wish to know what it will cost to establish themselves here, we append the present market prices to the following articles:

A single-room house can be built at a cost of	\$100 00
A two-room house with kitchen attached at a cost of	200 00
Barn and corral at a cost of	100 00
Mexican unbroken horses will cost each	25 00
Good American horses will cost each	\$50 to 100 00
Good milch cows will cost each	30 to 50 00
Single plows	20 to 30 00
Gang plows, four plows in each gang	60 to 65 00
Harness per set	20 00
Wagons	90 to 250 00
Hogs	8 to 12 00
Sheep	2 50 to 3 50
Osage Orange hedge plants per 1000	5 00
Grape cuttings per 1000	10 00
Blue gum trees per 100	5 00
Mulberry trees for silk per 100	6 00
Apple trees per 100	12 00
Pear trees per 100	25 00
Peach trees per 100	12 50
Plum trees per 100	25 00
Cherry trees per 100	25 00
Nectarine trees per 100	25 00
Persimmon trees per 100	35 00
Pomegranate trees per 100	35 00
Orange trees per 100	60 00
Lemon trees per 100	60 00
Lime trees per 100	60 00
Fig trees per 100	35 00
Olive trees per 100	30 00
Almond trees per 100	20 00
English walnut trees per 100	15 00
Strawberry plants per 100	1 50

The above prices are for trees two to five feet high and one to three years old. If grown from the seed, instead of buying from the nurseryman and paying him an immense profit, they could be produced at a fraction of the above prices.

It will be seen from the above list that a person desiring to secure a farm of 160 acres and commence on an economical basis, would require for 160 acres of land at \$10 per acre \$1,600:

One third payable down	\$533 33
House	100 00
Barn and corral	100 00
Two Horses	50 00
One set harness	20 00
One wagon	125 00
One plow	25 00
Household utensils, seed, groceries, and cash on hand	246 67
Total	\$1,200 00



